

# COMMUNICATIONS INSTRUCTIONS OPERATING SIGNALS

ACP131 (E)



MARCH 1997

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LETTER OF PROMULGATION  
FOR ACP131 (E)**

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2. ACP131 (E) is effective on receipt for CCEB Nations and when by the NATO Military Committee (NAMILCOM) for NATO nations and Strategic Commands.

**EFFECTIVE STATUS**

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3. All proposed amendments to the publication are to be forwarded to the national coordinating authorities of the CCEB or NAMILCOM.

For the CCEB Principals

N. CRAM  
Squadron Leader  
Permanent Secretary to CCEB

## RECORD OF MESSAGE CORRECTIONS

[illegible]

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## **CHAPTER 1**

### **GENERAL INSTRUCTIONS**

#### **101. PURPOSE**

The purpose of this publication is to list operating signals and provide instructions for their use.

#### **102. GENERAL**

This publication includes:

a. Operating Signals from the following series of international civil Q code:

(1) The series QAA to QNZ inclusive, the meanings of which are assigned by the International Civil Aviation Organization (ICAO). In general, the only civil stations that will have available a copy of this series are those of the Aeronautical Service. Therefore, this series is not to be used with other civil stations unless it is known that the station concerned is familiar with the series. (Note: Stations of the Aeronautical Service are those operated in accordance with ICAO international standards and recommended practices to provide for the safety of air navigation and for the regular, efficient and economical operation of the air services).

(2) The series QOA to QQZ inclusive is reserved for the Maritime Services.

(3) The series QRA to QUZ inclusive, the meanings of which are assigned by the International Telecommunications Union (ITU). In general, all civil stations will have available a copy of this series. Therefore, this series may be used with all civil stations unless the station concerned indicates its unfamiliarity with the series.

(4) The series QVA to QZZ inclusive has not been allocated to date.

b. Operating signals from the series ZAA to ZZZ inclusive of the allied military Z code. The series ZYA to ZZZ inclusive is reserved for the temporary or permanent assignment of meanings on an intra-military basis by any nation, service or command authorized use of this publication. For the convenience of assigning authorities, provision for this series (ZYA-ZZZ) is included in Chapter 5 of this publication.

c. Miscellaneous abbreviations and symbols developed or approved by ICAO for use with the series QAA to QNZ inclusive. These abbreviations and symbols, however, are authorized for use by allied military stations with any Q or Z signal subject to the use limitations, if any, of that Q or Z signal (see paragraph 103).

#### **103. AUTHORIZATION**



a. The series QAA to QUZ of the international civil Q code, and the series ZAA to ZZZ of the allied military Z code, are authorized for use between allied military stations subject to the provisions of paragraph 102. Q and Z signals of these series may be used together between allied military stations.

b. The series QAA to QUZ of the international civil Q code are authorized for use between Allied military stations and civil stations, subject to the provisions of paragraph 102. The allied military Z code (ZAA-ZZZ) is not authorized for use between allied military stations and civil commercial stations.

c. Any nation, service or command may prohibit or restrict the military use, within its area of jurisdiction, of any operating signal. However, when such operating signals are received from other users, they must be recognized and acted upon.

#### **104. INSTRUCTIONS**

a. Action. Q or Z signals ordering or indicating that an action is to be taken (a change of frequency, for example) will be answered before the action is taken, unless the "Broadcast" method is used or the station ordering or indicating the action has indicated that an answer is not required.

b. Affirmatives or Negatives. Operating signals, as appropriate, will be used by allied military stations to convey an affirmative or negative sense...

(1) To civil stations by adding "C" (affirmative) or "N" (negative) after the Q signal and any data used with it:

Examples (of replies):

(a) QFQ C means: (Yes) The approach and runway lights are lit.

(b) QAK N means: (No) There is no risk of collision. "NO", instead of "N", is authorized for use by and to civil stations of the Aeronautical Service.

(2) To allied military stations by using the appropriate Q or Z signal:

Examples (of replies):

(a) QHZ means: (Yes) Circle the aerodrome (or go around).

(b) ZOE Means: (Yes) Give me your message. I will dispose of it.

NOTE: In addition to the above, replies to questions from military stations may be made by using ZUE meaning Affirmative (Yes) or ZUG meaning Negative (No).

c. Blank Spaces. Blank spaces in the meanings of Q and Z signals will be completed, in the order in which they appear; however, blank spaces enclosed in parentheses normally will be completed on an optional basis only.

Examples:

(1) QBM BF6 1010Z means: Here is the message sent by BF6 at 1010Z hours.

NOTE: The meaning assigned QBM is "Here is the message sent by...at...hours"; therefore, as these blank spaces are not included in parentheses, all are completed, in the order in which they appear.

(2) ZKO BG2 means: I have handed over guard to BG2.

NOTE: The meaning assigned ZKO is "I have handed over guard (to...) (on...kHz (or MHz)) (serial number of last message received was...)"; however, in the above example, the user elected to complete only one of the blank spaces enclosed in parentheses.

d. Call Signs. Normally call signs will follow the Q or Z signal to which they refer; however, they also may precede the operating signal for separation or clarity.

e. Frequencies:

(1) When the meaning of a Q or Z signal includes the expression "on... kHz (or MHz)", the figures used alone (not supplemented by an abbreviation) always will indicate the frequency in kilohertz per second. To indicate the frequency in megahertz per second, the figures will be supplemented by the abbreviation "MHz".

(2) Provided that no confusion can arise, in those Q or Z signals whose meaning includes the expression "on...kHz (or MHz)", the circuit designator or other disguised reference, if available, will be used in place of the actual frequency.

(3) Although not provided for in the meaning of a Q or Z signal, a frequency may be used with any such operating signal by adding figures and the appropriate abbreviation ("kHz" (kilohertz) or "MHz" (megahertz)).

f. Numbered Alternates. Q and Z signals with numbered alternate meanings will be followed, without spacing, by the appropriate number to indicate the meaning intended.

Examples:

(1) QCB2 means: Delay is being caused by your slowness in answering.

NOTE: QCB has the following numbered alternate meanings - "Delay is being caused by...(1. your transmitting out of turn; 2. your slowness in answering; 3. lack of your reply to my...)."

(2) ZAP5 means: Work single sideband.

NOTE: ZAP has the following numbered alternate meanings - "Work...(1. simplex; 2. duplex; 3. duplex; 4. multiplex; 5. single sideband)."

g. Plain Language. Plain unabbreviated language is authorized for use to complete or amplify the meaning of operating signals only when no other approved method will do.

h. Questions. Operating signals, as appropriate, will be used by allied military stations to ask questions:

(1) Of civil stations, by adding the prosign IMI after the Q signal and any data used with it;

Example: QAR 15 IMI means: May I stop listening on the watch frequency for 15minutes?

(2) Of military stations, by inserting the prosign INT before the Q or Z signal to which it refers.

Examples:

(a) INT QAR 15 means: May I stop listening on the watch frequency for 15 minutes?

(b) INT ZDJ means: How many groups does your message contain?

i. Security. Operating signals possess no security. They must be regarded as the equivalent of plain language.

j. Separation. The separative sign (prosign II, written as a short dash) may be used to separate Q or Z signals when desired.

k. Time Groups. Time groups (including date-time groups) used with Q or Z signals always will be followed, without spacing, by a zone suffix letter (see ACP 121). Although not provided for in the meaning of a Q or Z signal, a time group (including date-time group) may be used with any such operating signal.

l. Units of Measurement. When units of measurement are desired for use which differ from those in the meaning of an operating signal, an appropriate abbreviation will be used (see Chapter 4).

m. Class of Emission (Chapter 6). When using operating signals concerning radio equipment or its use, e.g. QSU, QSW, ZTD, ZTE, ZTJ, ZTM, the class of emission/type of transmission may be indicated by use of the tables in Chapter 6. The operating signal ZTG is used for this purpose unless Chapter 6 is referred to in the meaning of the signal.

Examples:

- (1) QSU F1B means: Send or reply on this frequency use frequency shift keyed telegraphy.
- (2) ZTM ZTG R3E means: I am unable to use single sideband, reduced carrier, telephony.

**CHAPTER 2****OPERATING SIGNALS****DECODE****SECTION A - Q SIGNALS**

SIGNAL	QUESTION	ANSWER, ADVICE OR ORDER
QAA		
QAB	May I have clearance (for...) from...(place and/or control) to...(place and/or control) at...(figures and units) height above...(datum)?	You are cleared (or...is cleared) by... from... (place and/or control) to... (place and/or control) at...(figures and units) height above...(datum).
QAC		
QAD		
QAE		
QAF	Will you advice me when you are (were) at (over)...(place)?	I am (was) at (over)...(place) (at...hours) (at...(figures and units)) height above...(datum).
QAG		Arrange your flight in order to arrive over...(place) at...hours or I am arranging my flight in order to arrive over...(place) at...hours.
QAH	What is your height above... (datum)?	I am at...(figures and units) height above...(datum). Note: An aircraft is permitted to reply to QAH IMI by using any of the answer forms of signals QBF, QBG, QBH, QBK, QBN or QBP. In such cases the signal QAH is omitted from the reply. or Arrange your flight so as to reach...(figures and units) height above...(datum) at...(hours or place).
QAI	What is the essential traffic? Note: Relates to aircraft and not communication traffic.	The essential traffic is... Note: Relates to aircraft and not communication traffic.
QAJ		
QAK	Is there any risk of collision?	There is risk of collision. Note: This signal should be followed by appropriate Q signals or ICAO approved abbreviations giving instructions for avoiding collision.

QAL	Are you going to land at...(place)? or Has aircraft...landed at...(place)? (See also signal QTP.)	I am going to land at...(place) or (You may) land at...(place). or Aircraft...landed at...(place). (See also signal QTP.)
QAM	What is the latest available meteorological observation for...(place)?	Meteorological observation made at...(place) at...hours was as follows... Note: The information may be given in Q Code form or the AERO form of the International Meteorological Figure Code. When in Q Code, the information is to be given in the following sequence of Q signal answer (or advice) forms: QAN, QBA, QNY, QBB, QNH and/or QFE and, if necessary QMU, QNT, QBJ. It is not normally necessary to precede the QAN, QBA, QNY, and QBB information by these Q signals but this may be done if considered desirable. When in the AERO form of International Meteorological Figure Code the abbreviation AERO is to precede the information.
QAN	What is the surface wind direction and speed at... (place)?	The surface wind direction and speed at...(place) at...hours is (direction)...(speed figures and units). Note: Unless otherwise indicated in the question, answer (or advice) surface wind direction is given in degrees relative to MAGNETIC North.
QAO	What is the wind direction in degrees TRUE and speed at...(position or zone/s) at each of the...(figures) ...(units) levels above... (datum)?	The wind direction and speed (position or zone/s) at the following heights above... (datum is: ...(vertical distance in figures and units) ...degrees TRUE...(speed in figures and units)
QAP	Shall I listen for you (or for...) on...kHz (or (...MHz))? Note: If the frequency is given in megahertz, the abbreviation MHz is to be used. (See also signal QSX).	Listen for me (or for...) on... kHz (...MHz).  Note: If the frequency is given in megahertz, the abbreviation MHz is to be used. (See also signal QSX).
QAQ	Am I near a prohibited area (or...prohibited area)?	You are... 1) near 2) flying over a prohibited area (or...prohibited area).
QAR	May I stop listening on the watch	You may stop listening on the watch

	frequency for...minutes?	frequency for...minutes
QAS		
QAT		
QAU		I am about to jettison fuel.
QAV		
QAW		I am about to carry out overshoot procedure.
QAX		
QAY	Will you advise me when you pass (passed)...(place) bearing 090 (270) degrees relative to your heading?	I passed...(place) bearing... degrees relative to my heading at...hours.
QAZ	Are you experiencing communication difficulties through flying in a storm?	I am experiencing communication difficulties through flying in a storm Note: Attention is invited to the possible supplementary use of signals QAR, QBE, QCS, QRM, QRN, QRX, QSZ or the signal CL to amplify the meaning associated with signal QAZ.
QBA	What is the horizontal visibility at...(place)?	The horizontal visibility at... (place) at...hours is... (distance figures and units).
QBB	What is the amount, type and height above official aerodrome elevation of the base of the cloud (at...(place)?	The amount, type and height above official aerodrome elevation of the base of the cloud at... (place) at...hours is: ...eighths (...type) at...(figures and units)* height above official aerodrome elevation.
<p>*NOTE: The cloud amount, type (if reported) and vertical distance information is reported in sequence if several cloud layers are present, the order of reporting being from low to high levels in accordance with the following cloud layer specifications:</p> <p>a) the lowest individual layer of any amount;</p> <p>b) the next higher individual layer the amount of which is three-eighths or more (to the nearest eighth);</p> <p>c) the next higher individual layer the amount of which is five-eighths or more (to the nearest eighth).</p> <p>EXAMPLE: = QBB CYUL 1300 2 300 FT 3 1500 FT 6 9000 FT =</p>		
QBC	Report meteorological conditions as observed from your aircraft at... (position or zone) at...hours at...(figures and units) height above...(datum).	The meteorological conditions as observed from my aircraft at... (position or zone) at...hours at...(figures and units) height above...(datum) are... Note: The information may be given in AIREP, or Q Code form. When given in Q Code, the following sequence of Q signal QBC answer (or advice) forms is used: QMX, QNY, QAO, QDF, QMI, QFT and QNI.

QBD	How much fuel have you remaining (expressed as hours and/or minutes of consumption)?	Fuel remaining is...(hours and/or minutes of consumption).
QBE		I am about to wind in my aerial.
QBF	Are you flying in cloud?	I am flying in cloud at... (figures and units) height above...(datum) (and I am ascending (descending) to...(figures and units) height above that datum).
QBG	Are you flying above cloud?	I am flying above cloud and at...(figures and units) height above...(datum) or Maintain a vertical distance of...(figures and units) above cloud, smoke, haze or fog levels.
QBH	Are you flying below cloud?	I am flying below cloud and at...(figures and units) height above...(datum). or Maintain a vertical distance of...(figures and units) below cloud.
QBI	Is flight under IFR compulsory at...(place) (or from...to...(place))?	Flight under IFR is compulsory at...(place) (or from...to... (place)).
QBJ	What is the amount, type and height above...(datum) of the top of the cloud (at... (position or zone))?	At...hours at...(position or zone) the top of the cloud is: amount...eighths (...type) at...(figures and units) height above ...(datum).
QBK	Are you flying with no cloud in your vicinity?	I am flying with no cloud in my vicinity and at...(figures and units) height above ...(datum).
QBL		
QBM	Has...sent any message for me?	Here is the message sent by...at...hours.
QBN	Are you flying between two layers of cloud?	I am flying between two layers of cloud and at...(figures and units) height above ...(datum).
QBO	What is the nearest aerodrome at which flight under VFR is permissible and which would be suitable for my landing?	Flying under VFR is permissible at...(place) which would be suitable for your landing.
QBP	Are you flying in and out of cloud?	I am flying in and out of cloud and at ...(figures and units) height above ...(datum).
QBQ		
QBR		
QBS		Ascend (or descend) to... (figures and units) height above...(datum) before encountering instrument meteorological conditions or if visibility falls below... (figures and units of distance) and advise.



QBT	How far, along the runway, from the approach end, can the observer at the runway threshold see the runway lights which will be in operation for my landing (at...(place))?	At...hours, the observer at the threshold of runway number... could see the runway lights in operation for your landing (at...(place)) for a distance of...(figures and units) from the approach end. Note: If the station inquired of is not equipped to make the special observation requested, the reply to QBT IMI is given by the signal QNO.
QBU		
QBV	Have you reached the... (figures and units) height above...(datum) (or... (area or place))?	I have reached the...(figures and units) height above...(datum) (or...(area or place)). or Report reaching the...(figures and units) height above... (datum) (or...(area or place)).
QBW		
QBX	Have you left the... (figures and units) height above...(datum) (or...(area or place))?	I have left the... (figures and units) height above...(datum) (or...(area or place)). or Report leaving the...(figures and units) height above... (datum) (or...(area or place)).
QBY		
QBZ	Report your flying conditions in relation to clouds.	The reply to QBZ IMI is given by the appropriate answer form of signals QBF, QBG, QBH, QBK, QBN and QBP.
QCA	May I change from...(figures and units) to...(figures and units) height above...(datum)?	You may change from...(figures and units) to...(figures and units) height above...(datum). or I am changing from...(figures and units) to...(figures and units) height above...(datum).
QCB		Delay is being caused by... 1) your transmitting out of turn. 2) your slowness in answering. 3) lack of your reply to my...
QCC		
QCD		
QCE	When may I expect approach clearance?	Expect approach clearance at...hours. or No delay expected.
QCF		Delay indefinite. Expect approach clearance not later than...hours.
QCG		
QCH	May I taxi to...(place)?	Cleared to taxi to...(place). (the place is given in plain language).

QCI		Make a 360-degree turn immediately (turning to the...) or I am making a 360-degree turn immediately (turning to the...).
QCJ		
QCK		
QCL		
QCM		
QCN		
QCO		
QCP		
QCQ		
QCR		
QCS		My reception on...frequency has broken down.
QCT		
QCU		
QCV		
QCW		
QCX	What is your full call sign?	My full call sign is... or Use your full call sign until further notice.
QCY		I am working on trailing aerial. or Work on trailing aerial.
QCZ		
QDA		
QDB	Have you sent message...to...?	I have sent message...to...
QDC		
QDD		
QDE		
QDF	What is your D-Value at...(position)?  or What is the D-Value at... (place or position) at...hours) for the...millibar level?	My D-Value at...(position) at... (figures and units) height above the 1013.2 millibars datum is...(D-Value figures and units)... *(specify plus or minus). or The D-Value at...(place or position) at hours for the...millibar level is...(D-Value figures and units)...*(specify plus or minus). Note: When the true altitude (radio altitude) is greater than the pressure altitude PS (plus) is used and when it is less MS (minus) is used.
QDG		

QDH		
QDI		
QDJ		
QDK		
QDL	Do you intend to ask me for a series of bearings?	I intend to ask you for a series of bearings.
QDM	Will you indicate the MAGNETIC heading for me to steer towards you (or...) with no wind?	The MAGNETIC heading for you to steer to reach me (or...) with no wind was...degrees (at...hours).
QDN		
QDO		
QDP	Will you accept control (or responsibility) of (for)... now (or at ...hours)?	I will accept control (or responsibility) of (for)...now (or at...hours).
QDQ		
QDR	What is my MAGNETIC bearing from you (or from...)?	Your MAGNETIC bearing from me (or from...) was...degrees (at... hours).
QDS		
QDT	Are you flying in visual meteorological conditions?	I am flying in visual meteorological conditions. or Fly at all times in visual meteorological conditions.
QDU		Cancel my IFR flight plan.
QDV	Are you flying in a horizontal visibility of less than... (figures and units)?	I am flying in a horizontal visibility of less than... (figures and units) at... (figures and units) height above...(datum).
QDW		
QDX		
QDY		
QDZ		
QEA	May I cross the runway ahead of you?	You may cross the runway ahead of me.
QEB	May I turn at the intersection?	Taxi as follows at the intersection... (straight ahead DRT turn left LEFT turn right RITE)
QEC	May I make a 180-degree turn and return down the runway?	You may make a 180-degree turn and return down the runway.
QED	Shall I follow the pilot vehicle?	Follow the pilot vehicle.
QEE		
QEF	Have I reached my parking area? or Have you reached your parking area?	You have reached your parking area. or I have reached my parking area.
QEG	May I leave the parking area? or Have you left the parking area?	You may leave the parking area. or I have left the parking area.

QEH	May I move to the holding position for runway number...? or Have you moved to the holding position for runway number...?	Cleared to the holding position for runway number... or I have moved to the holding position for runway number...
QEI		
QEJ	May I assume position for take-off? or Have you assumed position for take-off?	Cleared to hold at take-off position for runway number... or I am assuming take-off position for runway number...and am holding.
QEK	Are you ready for immediate take-off?	I am ready for immediate take-off.
QEL	May I take-off (and make a... hand turn after take-off)?	You are cleared to take-off (turn as follows after take-off...).
QEM	What is the condition of the landing surface at...(place)?	The condition of the landing surface at...(place) is... Note: The information is given by sending appropriate NOTAM Code groups.
QEN	Shall I hold my position?	Hold your position.
QEO	Shall I clear the runway (or landing area)? or Have you cleared the runway(or landing area)?	Clear the runway (or landing area). or I have cleared the runway (or landing area).
QEP		
QEQ		
QER		
QES	Is a right-hand circuit in force at...(place)?	A right-hand circuit is in force at...(place).
QET		
QEU		
QEV		
QEW		
QEX		
QEY		
QEZ		
QFA	What is the meteorological forecast for...(flight, route, section of route or zone) for the period...hours until ...hours?	The meteorological forecast for...(flight, route, section of route or zone) for the period...hours until hours....is... Note: When the forecast is given in Q Code the following sequence of Q signal answer (or advice) forms is to be given: QAO, QMX, QMI, QNY, QBA, QMW, QFT and QNI.
QFB		The...

		1) approach 2) runway 3) approach and runway lights are out of order.
QFC	What is the amount, the type and the height above...(datum) of the base of the cloud at...(place, position or zone)?	At...(place, position or zone) the base of the cloud is... eighths...type at...(figures and units) height above... (datum). Note: If several cloud layers or masses are present, the lowest is reported first.
QFD	1) Is the...visual beacon(at...(place)) in operation? 2) Will you switch on the... visual beacon (at...(place))? 3) Will you extinguish the aerodrome visual beacon (at...(place)) until I have landed?	1) The...visual beacon (at... (place)) is in operation. 2) I will switch on the... visual beacon (at...(place)). 3) I will extinguish the aerodrome visual beacon (at... (place)) until your landing is completed.
QFE	(At...(place)) what is the present atmospheric pressure at official aerodrome elevation?	At...(place) the atmospheric pressure at official aerodrome elevation is (or was observed at...hours to be) ...millibars.
QFF	(At...(place)) what is the present atmospheric pressure converted to mean sea level in accordance with meteorological practice?	At...(place) the atmospheric pressure converted to mean sea level in accordance with meteorological practice is (or was determined at...hours to be) ...millibars.
QFG	Am I overhead?	You are overhead.
QFH	May I descend below the clouds?	You may descend below the clouds.
QFI	Are the aerodrome lights lit?	The aerodrome lights are lit. or Please light the aerodrome lights.
QFJ		
QFK		
QFL		
QFM	What height above...(datum)... 1) should I maintain?  2) are you maintaining?  3) do you intend cruising at?	1) Maintain (or fly at)... (figures and units) height above...(datum). 2) I am maintaining...(figures and units) height above ...(datum). 3) I intend cruising at... (figures and units) height above...(datum).
QFN		
QFO	May I land immediately?	You may land immediately.
QFP	Will you give me the latest information concerning... facility (at...(place))?	The latest information concerning...facility (at... (place)) is as follows... Note: The information is given by sending appropriate NOTAM Code groups.
QFQ	Are the approach and runway lights lit?	The approach and runway lights are lit. or Please light the approach and runway lights.

QFR	Does my landing gear appear damaged?	Your landing gear appears damaged.
QFS	Is the...radio facility at...(place) in operation?	The...radio facility at...(place) is in operation (or will be in operation in...hours). or Please have the...radio facility at...(place) put in operation.
QFT	Between what heights above...(datum) has ice formation been observed (at...(position or zone))?	Ice formation has been observed at ... (position or zone) in the type of...and with an accretion rate of...between...(figures and units) and...(figures and units) heights above...(datum).
QFU	What is the magnetic direction (or number) of the runway to be used?	The magnetic direction (or number) of the runway to be used is... Note: The runway number is indicated by a two-figure group and the magnetic direction by a three-figure group.
QFV	Are the floodlights switched on?	The floodlights are switched on. or Please switch on the floodlights.
QFW	What is the length of the runway in use in...(units)?	The length of runway...now in use is...(figures and units).
QFX		I am working (or am going to work) on a fixed aerial. or Work on a fixed aerial.
QFY	Please report the present meteorological landing conditions (at...(place)).	The present meteorological landing conditions at...(place) are... Note: When given in Q Code the information is sent in the following sequence: QAN, QBA, QNY, QBB, QNH, and/or QFE and, if necessary, QMU, QNT, QBJ. It is not normally necessary to precede the QAN, QBA, QNY and QBB information by these Q signals but this may be done if considered desirable.
QFZ	What is the aerodrome meteorological forecast for...(place) for the period...hours until...hours?	The aerodrome meteorological forecast for...(place) for the period...hours until...hours is... Note: When given in Q Code the following sequence of Q signal answer (or advice) forms is to be used: QAN, QBA, QNY, QBB and, if necessary, QMU, QNT and QBJ.
QGA		
QGB		

QGC		There are obstructions to the... of runway...
QGD	Are there on my track any obstructions whose elevation equals or exceeds my altitude?	There are obstructions on your track ... (figures and units) height above... (datum).
QGE	What is my distance to your station (or to...)?	Your distance to my station (or to...) is... (distance figures and units). Note: This signal is normally used in conjunction with one of the signals QDM, QDR, QTE or QUI.
QGF		
QGG		
QGH	May I land using... (procedure or facility)?	You may land using... (procedure or facility).
QGI		
QGJ		
QGK	What track should I make good?  or What track are you making good?	Make good a track from... (place) on ... degrees ... (true or magnetic).  or I am making good a track from... (place) on... degrees... (true or magnetic).
QGL	May I enter the... (control area or zone) at... (place)?	You may enter the... (control area or zone) at... (place).
QGM		Leave the... (control area or zone).
QGN	May I be cleared to land (at... (place)?	You are cleared to land (at... (place).
QGO		Landing is prohibited at... (place).
QGP	What is my number for landing?	You are number... to land.
QGQ	May I hold at... (place)?	Hold at... (place) at... (figures and units) height above... (datum) and await orders.
QGR		
QGS		
QGT		Fly for... minutes on a heading that will enable you to maintain a track reciprocal to your present one.
QGU		Fly for... minutes on a magnetic heading of... degrees.
QGV	Do you see me?  or Can you see the aerodrome?  or Can you see... (aircraft)?	I see you at... (cardinal or quadrantal point of direction).  or I can see the aerodrome  or I see... (aircraft).
QGW	Does my landing gear appear to be down and in place?	Your landing gear appears to be down and in place.
QGY		
QGZ		Hold on... direction of... facility.
QHA		

QHB		
QHC		
QHD		
QHE	Will you inform me when you are on...leg of approach?	I am on... 1) cross-wind leg 2) down-wind leg of approach. 3) base leg 4) final leg
QHF		
QHG	May I enter traffic circuit at...(figures and units) height above...(datum)?	Cleared to enter traffic circuit at...(figures and units) height above...(datum).
QHH	Are you making an emergency landing?	I am making an emergency landing. or Emergency landing being made at...(place). All aircraft below...(figures and units) height above...(datum) and within a distance of... (figures and units) leave...(place or headings)
QHI	Are you (or is...)... 1) waterborne? 2) on land?	I am (or...is)...at...hours. 1) waterborne 2) on land
QHJ		
QHK		
QHL		
QHM		
QHN		
QHO		
QHP		
QHQ	May I make a...approach (at...(place))? or Are you making a... approach?	You may make a...approach (at... (place)). or I am making a...approach.
QHR		
QHS		
QHT		
QHU		
QHV		
QHW		
QHX		
QHY		
QHZ	Shall I circle the aerodrome (or go around)?	Circle the aerodrome (or go around).
QIA		
QIB		



QIC	May I establish communication with ...radio station on...kHz. (or...MHz.) now (or at...hours)?	Establish communication with...radio station on...kHz. (or...MHz.) now (or at...hours). or I will establish communication with ...radio station on...kHz (or..MHz) now (or at...hours)
QID		
QIE		
QIF	What frequency is...using?	...is using...kHz. (or...MHz).
QIG		
QIH		
QII		
QIJ		
QIK		
QIL		
QIM		
QIN		
QIO		
QIP		
QIQ		
QIR		
QIS		
QIT		
QIU		
QIV		
QIW		
QIX		
QIY		
QIZ		
QJA	Is my... 1) tape) 2) mark and space) reversed?	Your... 1) tape) 2) mark and space) is reversed.
QJB	Will you use... 1) radio? 2) cable? 3) telegraph? 4) teletypewriter? 5) telephone? 6) receiver? 7) transmitter? 8) reperforator?	I will use... 1) radio. 2) cable. 3) telegraph. 4) teletypewriter. 5) telephone. 6) receiver. 7) transmitter. 8) reperforator.
QJC	Will you check your... 1) transmitter distributor? 2) auto-head? 3) perforator?	I will check my... 1) transmitter distributor. 2) auto-head. 3) perforator.

	4) reperforator? 5) printer? 6) printer motor? 7) keyboard? 8) antenna system?	4) reperforator. 5) printer. 6) printer motor. 7) keyboard. 8) antenna system.
QJD	Am I transmitting... 1) in letters? 2) in figures?	You are transmitting... 1) in letters. 2) in figures.
QJE	Is my frequency shift... 1) too wide? 2) too narrow? 3) correct?	Your frequency shift is... 1) too wide. 2) too narrow (by...Hz). 3) correct.
QJF		My signal as checked by monitor...is satisfactory... 1) locally. 2) as radiated.
QJG	Shall I revert to automatic relay?	Revert to automatic relay.
QJH	Shall I run... 1) my test tape? 2) a test sentence?	Run... 1) your test tape. 2) a test sentence.
QJI	Will you transmit a continuous... 1) mark? 2) space?	I am transmitting a continuous... 1) mark. 2) space.
QJJ		
QJK	Are you receiving... 1) a continuous mark? 2) a continuous space? 3) a mark bias? 4) a space bias?	I am receiving... 1) a continuous mark. 2) a continuous space. 3) a mark bias. 4) a space bias.
QJL		
QJM		
QJN		
QJO		
QJP		
QJQ		
QJR		
QJS		
QJT		
QJU		
QJV		
QJW		
QJX		
QJY		
QJZ		
QKA		

QKB		
QKC		The sea conditions (at...position).... 1) permit alighting but not take-off. 2) render alighting extremely hazardous.
QKD		
QKE		
QKF	May I be relieved (at... hours)?	You may expect to be relieved at...hours by...1) aircraft... (identification) (type...). 2) vessel whose call sign is... (call sign) (and/or whose name (is...(name))).
QKG	Will relief take place when ... (identification) establishes... 1) visual, 2) communications, contact with survivors?	Relief will take place when... (identification) establishes... 1) visual, 2) communications, contact with survivors.
QKH	Report details of the parallel sweep (track) search being (or to be) conducted?  or In the parallel sweep (track search being (or to be) conducted, what is (are). 1) the direction of sweeps,  2) the separation between  3) the height above the datum, employed in the search pattern?	The parallel sweep (track) search is being (or to be) conducted... 1) with direction of sweeps...degrees... (true or magnetic). 2) with...(distance figures sweeps, and units) separation between sweeps. 3) at a height of... (figures) above... (datum).
QKI		
QKJ		
QKK		
QKL		
QKM		
QKN		Aircraft plotted (believed to be you) in position...on track....degrees at...hours.
QKO	What other units are (or will be) taking part in the operation (... (identification of operation))?	In the operation (... (identification)) the following units are (or will be) taking part...(name of units).  or ...(name) unit is taking part in operation (... (identification)) (with effect from... hours).
QKP	Which pattern of search is being followed?	The search pattern is... 1) parallel sweep. 2) square search. 3) creeping line ahead. 4) track crawl.

		5) contour search. 6) combined search by aircraft and ship. 7) ...(specify).
QKQ		
QKR		
QKS		
QKT		
QKU		
QKV		
QKW		
QKX		
QKY		
QKZ		
QLA		
QLB	Will you monitor...station and report regarding range, quality, etc.?	I have monitored...station and report (briefly) as follows...
QLC		
QLD		
QLE		
QLF		
QLG		
QLH	Will you use simultaneous keying on...frequency and...frequency?	I will now key simultaneously on...frequency and...frequency.
QLI		
QLJ		
QLK		
QLL		
QLM		
QLN		
QLO		
QLP		
QLQ		
QLR		
QLS		
QLT		
QLU		
QLV	Is the...radio facility still required?	The...radio facility is still required.
QLW		
QLX		
QLY		
QLZ		
QMA		
QMB		
QMC		

QMD		
QME		
QMF		
QMG		
QMH		Shift to transmit and receive on ...kHz (or MHz); if communication is not established within 5 minutes, revert to present frequency.
QMI	Report the vertical distribution of cloud (at ...(position or zone)) as observed from your aircraft.	The vertical distribution of cloud as observed from my aircraft at...hours at... (position or zone) is: lowest layer Observed *...eighths (...type) with base of...(figures and units) and tops of...(figures and units) (*and similarly in sequence for each of the layers observed.) height above...(datum). Example: = QMI 1400 11 2 CU 1000 FT 2500 FT 6 SC 6000 FT 10000 FT 5 AC 13000 FT 14000 FT ALT =
QMJ		
QMK		
QML		
QMM		
QMN		
QMO		
QMP		
QMQ		
QMR		
QMS		
QMT		
QMU	What is the surface temperature at...(place) and what is the dew point temperature at that place?	The surface temperature at...(place) at ... hours is...degrees and the dew point temperature at that time and place is...degrees.
QMV		
QMW	At...(position or zone) what is (are) the height(s) above...(datum) of the zero Celsius isotherm(s)?	At...(position or zone) the zero Celsius isotherm(s) is (are) at...(figures and units) height(s) above ...(datum).
QMX	What is the air temperature (at... (position or zone)) (at...hours) at the... (figures and units) height above... (datum)?	At...(position or zone) at... hours the air temperature is...(degrees and units) at... (figures and units) height above...(datum). Note: Aircraft reporting QMX information will transmit the temperature figures as corrected for airspeed.
QMY		
QMZ	Have you any amendments to the flight	The following amendment(s) should be

	forecast in respect of section of route yet to be traversed?	made to the flight forecast... (If no amendments, signal QMZ NIL.)
QNA		
QNB		
QNC		
QND		
QNE	What indication will my altimeter give on landing at...(place) at...hours, my sub-scale being set to 1013.2 millibars (29.925 inches)?	On landing at...(place) at... hours, with your sub-scale being set to 1013.2 millibars (29.92 inches), your altimeter will indicate...(figures and units).
QNF		
QNG		
QNH	What should I set on the sub-scale of my altimeter so that the instrument would indicate my elevation if I were on the ground at your station?	If you set the sub-scale of your altimeter to read...millibars (or hundredths of an inch*), the instrument would indicate your elevation if you were on the ground at my station at...hours. Note: When the setting is given in hundredths of an inch the abbreviation "INS" is used to identify the units.
QNI	Between what heights above...(datum) has turbulence been observed at...(position or zone)?	Turbulence has been observed at...(position or zone) with an intensity of...between ... (figures and units) and... (figures and units) heights above...(datum).
QNJ		
QNK		
QNL		
QNM		
QNN		
QNO		I am not equipped to give the information (or provide the facility) requested.
QNP		
QNQ		
QNR		I am approaching my point of no return.
QNS		
QNT	What is the maximum gust speed of the surface wind at...(place)?	The maximum gust speed of the surface wind at...(place) at... hours is...(speed figures and units).
QNU		
QNV		
QNW		
QNX		
QNY	What is the present weather and the intensity thereof at...(place, position or zone)?	The present weather and intensity thereof at...(place, position or zone) at...hours is... (See Notes a) and b)).

		Notes: a) When present weather information is transmitted by a ground station, the information shall be selected from the present weather table (Table III) in PANSMET (Doc 7605- MET/526). If none of these conditions prevail the reply shall be QNY NIL.
QNY (Cont'd)		b) When present weather information is transmitted by an aircraft, the information shall be selected from Item 11, AIREP. If none of these conditions prevail the reply shall be QNY NIL or alternatively the appropriate answer (or advice) form of signals QBF, QBG, QBH, QBK, QBN or QBP. The alter-native may also be given in addition to present weather conditions when one or more of the conditions listed in Item 11 prevail.
QNZ		
QOA	Can you communicate by radiotelegraphy (500 kHz)?	I can communicate by radiotelegraphy (500 kHz). <u>(MARITIME USE ONLY)</u>
QOB	Can you communicate by radiotelephony (2182 kHz)?	I can communicate by radiotelephony (2182 kHz). <u>(MARITIME USE ONLY)</u>
QOC	Can you communicate by radiotelephony(channel 16 - frequency 156.80 MHz)?	I can communicate by radiotelephony (channel 16 - frequency 156.80 MHz). <u>(MARITIME USE ONLY)</u>
QOD	Can you communicate with me in... 0. Dutch      5. Italian 1. English    6. Japanese 2. French     7. Norwegian 3. German    8. Russian 4. Greek      9. Spanish?	I can communicate with you in... 0. Dutch      5. Italian 1. English    6. Japanese 2. French     7. Norwegian 3. German    8. Russian 4. Greek      9. Spanish <u>(MARITIME USE ONLY)</u>
QOE	Have you received the safety signal sent by...(name and/or call sign)?	I have received the safety signal sent by...(name and/or call sign). <u>(MARITIME USE ONLY)</u>
QOF	What is the commercial quality of my signals?	The quality of your signals is... 1) not commercial 2) marginally commercial 3) commercial <u>(MARITIME USE ONLY)</u>
QOG	How many tapes have you to send?	I have...tapes to send. <u>(MARITIME USE ONLY)</u>
QOH	Shall I send a phasing signal	Send a phasing signal for...seconds.

	for...seconds?	(MARITIME USE ONLY)
QOI	Shall I send my tape?	Send your tape. (MARITIME USE ONLY)
QOJ	Will you listen on... kHz (or MHz) for signals of emergency position-indicating radio beacon?	I am listening on...kHz (or MHz) for signals of emergency position-indicating radio beacon. (MARITIME USE ONLY)
QOK	Have you received the signals of an emergency position-indicating radio beacon on...kHz(or MHz)?	I have received the signals of an emergency position- indicating radio beacon on ...kHz (or MHz). (MARITIME USE ONLY)
QOL	Is your vessel fitted for reception of selective calls? If so, what is your selective call number or signal?	My vessel is fitted for the reception of selective calls. My selective call number or signal is...(MARITIME USE ONLY)
QOM	On what frequencies can your vessel be reached by a selective call?	My vessel can be reached by a selective call on the following Frequency(ies)... (periods of time to be added is necessary). (MARITIME USE ONLY)
QON to QOS	The series QON to QOS inclusive is reserved for the Maritime Services.	
QOT	Do you hear my call; what is the approximate delay in minutes before we may exchange traffic?	I hear your call; the approximate delay is ... minutes. (MARITIME USE ONLY)
QOU to QQZ	The series QOU to QQZ inclusive is reserved for the Maritime Services	
QRA	What is the name of your station?	The name of my station is...
QRB	How far approximately are you from my station?	The approximate distance between our stations is...nautical miles (or...kilometers).
QRC	By what private enterprise (or State administration) are accounts for charges for your station settled?	The accounts for charges of my station are settled by the private enterprise...(or State administration).
QRD	Where are you bound and where are you from?	I am bound for...from...
QRE	What is your estimated time of arrival at... (or over...) (place)?	My estimated time of arrival at...(or over...) (place) is...hours.
QRF	Are you returning to... (place)?	I am returning to...(place). or Return to...(place).
QRG	Will you tell me my exact frequency (or that of...)?	Your exact frequency (or that of...) is...kHz (or MHz).
QRH	Does my frequency vary?	Your frequency varies.
QRI	How is the tone of my transmission?	The tone of your transmission is... 1) good. 2) variable. 3) bad.
QRJ	How many radiotelephone calls have you to book?	I have...radiotelephone calls to book.
QRK	What is the intelligibility of my signals	The intelligibility of your signals (or those



	(or those of...)?	of...) is... 1) bad. 2) poor. 3) fair. 4) good. 5) excellent.
QRL	Are you busy?	I am busy (or I am busy with...). Please do not interfere.
QRM	Are you being interfered with?	I am being interfered with 1) nil 2) slightly 3) moderately 4) severely 5) extremely.
QRN	Are you troubled by static?	I am troubled by static 1) nil 2) slightly 3) moderately 4) severely 5) extremely.
QRO	Shall I increase transmitter power?	Increase transmitter power.
QRP	Shall I decrease transmitter power?	Decrease transmitter power.
QRQ	Shall I send faster?	Send faster (...words per minute).
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send at...words per minute.
QRS	Shall I send more slowly?	Send more slowly (...words per minute).
QRT	Shall I stop sending?	Stop sending.
QRU	Have you anything for me?	I have nothing for you.
QRV	Are you ready?	I am ready.
QRW	Shall I inform...that you are calling him on...kHz(or MHz).	Please inform...that I am calling him on...kHz (or MHz).
QRX	When will you call me again?	I will call you again at...hours (on...kHz (or MHz).
QRY	What is my turn? (Relates to communication.)	Your turn is number...(or according to any other indication). (Relates to communication)
QRZ	Who is calling me?	You are being called by...(on... kHz (or MHz).
QSA	What is the strength of my signals (or those of...)?	The strength of your signals (or those of...) is... 1) scarcely perceptible. 2) weak. 3) fairly good. 4) good. 5) very good.
QSB	Are my signals fading?	Your signals are fading.

QSC	Are you a cargo vessel?	I am a cargo vessel.
QSD	Is my keying defective?	Your keying is defective.
QSE	What is the estimated drift of the survival craft?	The estimated drift of the survival craft is...(figures and units).
QSF	Have you effected rescue?	I have effected rescue and am proceeding to...base (with... persons injured requiring ambulance).
QSG	Shall I send...telegrams at a time?	Send...telegrams at a time.
QSH	Are you able to home on your D/F equipment?	I am able to home on my D/F equipment (on station...).
QSI		I have been unable to break in on your transmission.or Will you inform...(call sign) that I have been unable to break in on his transmission (on...kHz. (or...MHz)).
QSJ	What is the charge to be collected to...including your internal telegraph charge?	The charge to be collected to... including my internal telegraph charge is...francs.
QSK	Can you hear me between your signals and if so can I break in on your transmission?	I can hear you between my signals; break in on my transmission.
QSL	Can you acknowledge receipt?	I am acknowledging receipt
QSM	Shall I repeat the last telegram which I sent you(or some previous telegram)?	Repeat the last telegram which you sent me (or telegram(s) number(s)...).
QSN	Did you hear me (or... (call sign)) on... kHz (or MHz)?	I did hear you (or...(call sign)) on...kHz (or MHz).
QSO	Can you communicate with... direct or by relay?	I can communicate with...direct(or by relay through...).
QSP	Will you relay to...free of charge?	I will relay to...free of charge.
QSQ	Have you a doctor on board (or is...(name of person) on board)?	I have a doctor on board (or... (name of person) is on board).
QSR	Shall I repeat the call on the calling frequency?	Repeat your call on the calling frequency; did not hear you (or have interference).
QSS	What working frequency will you use?	I will use the working frequency...kHz (normally only the last three figures of the frequency need be given).
QST		
QSU	Shall I send or reply on this frequency (or on... kHz (or MHz)) (with emissions of class...)?	Send or reply on this frequency(or on...kHz (or MHz)) (with emissions of class...).
QSV	Shall I send a series of V's on this frequency (or...kHz (or MHz))?	Send a series of V's on this frequency (or on...kHz (or MHz)).
QSW	Will you send on this frequency (or on...kHz (or MHz)) (with emissions of class...)?	I am going to send on this frequency (or on...kHz (or MHz)) (with emissions of class...).
QSX	Will you listen to...(call sign(s))	I am listening to...(call sign(s)) on...kHz (or

	on...kHz (or MHz)?	MHz).
QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency (or on...kHz (or MHz)).
QSZ	Shall I send each word or group more than once?	Send each word or group twice(or...times).
QTA	Shall I cancel telegram number...?	Cancel telegram number...
QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.
QTC	How many telegrams have you to send?	I have...telegrams for you (or for...).
QTD	What has the rescue vessel or rescue aircraft recovered?	...(identification) has recovered... 1) ...(number) survivors. 2) ...wreckage. 3) ...(number) bodies.
QTE	What is my TRUE bearing from you? degrees (at...hours). or What is my TRUE bearing from... (call sign)? or What is the TRUE bearing of...(call sign) from...(call sign)?	Your TRUE bearing from me is... or Your TRUE bearing from...(call sign) was ...degrees (at...hours). or The TRUE bearing of...(call sign) from...(call sign) was...degrees at...hours.
QTF	Will you give me the position of my station according to the bearings taken by the D/F stations which you control?	The position of your station according to the bearings taken by the D/F stations which I control was... latitude... longitude (or other indication of position), class...at...hours.
QTG	Will you send two dashes of ten seconds each followed by your call sign (repeated...times) (on...kHz (or MHz))? or Will you request...to send two dashes of ten seconds followed by his call sign (repeated...times) on... kHz (or MHz)?	I am going to send two dashes of ten seconds each followed by my call sign (repeated ...times) (on...kHz (or MHz)). or I have requested...to send two dashes of ten seconds followed by his call sign (repeated... times) on...kHz (or MHz).
QTH	What is your position in latitude and longitude (or... according to any other indication)?	My position is...latitude longitude (or according to any other indication).
QTI	What is your TRUE track?	My TRUE track is...degrees.
QTJ	What is your speed? (Requests the speed of a ship or aircraft through aircraft through the water or air respectively.)	My speed is...knots (or... kilometers or...statute miles per hour). (Indicates the speed of a ship or the water or air respectively.)
QTK	What is the speed of your aircraft in relation to the surface of the earth?	The speed of my aircraft in relation to the surface of the earth is...knots (or...kilometers or...statute miles per hour).
QTL	What is your TRUE heading?	My TRUE heading is...degrees.

QTM	What is your MAGNETIC heading?	My MAGNETIC heading is...degrees.
QTN	At what time did you depart from...(place)?	I departed from...(place) at...hours.
QTO	Are you airborne? or Have you left dock (or port)?	I am airborne. or I have left dock (or port).
QTP	Are you going to alight (or land)? or Are you going to enter dock (or port)?	I am going to alight (or land). or I am going to enter dock (or port).
QTQ	Can you communicate with my station by means of the international code of signals?	I am going to communicate with your station by means of the international code of signals.
QTR	What is the correct time?	The correct time is...hours.
QTS	Will you send your call sign for tuning purposes or so that your frequency can be measured now (or at...hours) on...kHz (or MHz)?	I will send my call sign for tuning purposes or so that my frequency may be measured now (or at...hours) on...kHz (or MHz).
QTT		The identification signal which follows is superimposed on another transmission.
QTU	What are the hours during which your station is open?	My station is open from... to...hours.
QTV	Shall I stand guard for you on the frequency of...kHz(or MHz) (from...to...hours)?	Stand guard for me on the frequency of...kHz (or MHz) (from...to...hours).
QTW	What is the condition of survivors?	Survivors are in...condition and urgently need...
QTX	Will you keep your station open for further communication with me until further notice (or until...hours)?	I will keep my station open for further communication with you until further notice (or until... hours).
QTY	Are you proceeding to the position of incident and if so when do you expect to arrive?	I am proceeding to the position of incident and expect to arrive at...hours (on...date).
QTZ	Are you continuing the search?	I am continuing the search for.. (aircraft, ship, survival craft,. survivors or wreckage).
QUA	Have you news of... (call sign)?	Here is news of...(call sign).
QUB	Can you give me in the following order information concerning: the direction.... in degrees TRUE and speed of the surface wind; visibility; present weather; and amount, type and height of base of cloud above surface elevation at...(place of observation)?	Here is the information requested (The units used for speed and distances should be indicated.)
QUC	What is the number (or other indication) of the last message you received from me(or from...(call sign))?	The number (or other indication) of the last message I received from you (or from... (call sign)) is...

QUD	Have you received the urgency signal sent by... (call sign of mobile station)?	I have received the urgency signal sent by...(call sign of mobile station) at...hours.
QUE	Can you use telephony in... (language), with interpreter if necessary; if so, on what frequencies?	I can use telephony in... (language) on...kHz (or MHz).
QUF	Have you received the distress signal sent by... (call sign of mobile station)?	I have received the distress signal sent by...(call sign of mobile station) at...hours.
QUG	Will you be forced to alight(or land)?	I am forced to alight (or land) immediately. or I will be forced to alight (or land) at... (position or place) at...hours.
QUH	Will you give me the present barometric pressure at sea level? Aeronautical Note: Stations of the international aeronautical telecommunication service will interpret this signal as: What is the present atmospheric pressure at the present water level?	The present barometric pressure at sea level is...(units). Aeronautical Note: Stations of the international aeronautical telecommunication service will interpret this signal as: The present atmospheric pressure at the present water level at... (place or position) at...hours is...(figures and units).
QUI	Are your navigation lights working?	My navigation lights are working.
QUJ	Will you indicate the TRUE track to reach you (or...)?	The TRUE track to reach me (or...) is...degrees at...hours.
QUK	Can you tell me the condition of the sea observed at... (place or coordinates)?	The sea at...(place or coordinates) is...
Aeronautical Note: Stations of the international aeronautical telecommunication service will complete the answer, information or advice form by the use of a numbered alternative as given hereunder, selected according to the average wave height as obtained from the larger well formed waves of the wave system being observed. If observed height coincides with one of the limits, report the lower numbered alternative, e.g. waves with a mean maximum height of 4 meters are to be reported as "5".		

Number		Height	
		Meters	Feet (approx.)
0	Calm-glassy	0	0
1	Calm- rippled	0 - 0.1	0 - 1/3
2	Smooth Wavelets	0.1 - 0.5	1/3 - 1 2/3
3	Slight	0.5 - 1.25	1 2/3 - 4
4	Moderate	1.25 - 2.5	4 - 8
5	Rough	2.5 - 4	8 - 13
6	Very Rough	4 - 6	13 - 20
7	High	6 - 9	20 - 30
8	Very High	9 - 14	30 - 45
9	Phenomenal	Over 14	Over 45

QUL	Can you tell me the swell observed at...(place or coordinates)?	The swell at...(place or coordinates) is...
Aeronautical Note: Stations of the international aeronautical telecommunication service will complete the answer, information or advice form by the use of the following numbered alternatives:		

Number	Length of Swell	Height	Number	Length of Swell	Height
0	-	-	5	Long	Moderate
1	Short or Average	Low	6	Short	Heavy
2	Long	Low	7	Average	Heavy
3	Short	Moderate	8	Long	Heavy
4	Average	Moderate	9	Confused	-

Additionally, stations of the international aeronautical telecommunication service may indicate the direction of swell by the use of the appropriate cardinal or quadrantal point abbreviation N, NE, E, SE, etc. following the numbered alternate for indicating swell condition. The descriptions in the above numbered alternatives are as follows:

	Length of Swell	
	Meters	Feet (Approx.)
Short	0 - 100	0 - 300
Average	100 - 200	300 - 600
Long	Over 200	Over 600

	Height of Swell	
	Meters	Feet (Approx.)
Low	0 - 2	0 - 7
Moderate	2 - 4	7 - 13
Heavy	Over 4	Over 13

When there is no swell, the numbered alternative "0" is used; when the swell is such that the length and height of the swell waves cannot be determined, the numbered alternative "9" is used.

QUM	May I resume normal working?	Normal working may be resumed.
QUN	Will vessels in my immediate vicinity (or in the vicinity of...latitude ...longitude(or of...)) please indicate their position, TRUE course and speed? Aeronautical Notes: a) All stations of the international aeronautical telecommunication service will interpret this signal (in part) as	My position, TRUE course and speed are...  Aeronautical Notes: a) All stations of the international aeronautical telecommunication service will interpret this signal (in part) as referring to TRUE TRACK.

	referring to TRUE TRACK. b) English-speaking stations of the maritime mobile service may interpret this signal (in part) as referring to TRUE HEADING. When communicating with such stations it is recommended that that supplementary use be made of the signal QTI to avoid any misunderstanding.	b) English-speaking stations of the maritime mobile service may interpret this signal (in part) as referring TRUE HEADING. When communicating with such stations it is recommended that supplementary use be made of the signal QTI to avoid any misunderstanding.
QUO	Shall I search for... 1) aircraft, 2) ship, 3) survival craft, in the vicinity of... latitude...longitude (or according to any other indication)?	Please search for... 1) aircraft, 2) ship, 3) survival craft, in the vicinity of...latitude... longitude (or according to any other indication).
QUP	Will you indicate your position by... 1) searchlight? 2) black smoke trail? 3) pyrotechnic lights?	My position is indicated by... 1) searchlight. 2) black smoke trail. 3) pyrotechnic lights.
QUQ	Shall I train my searchlight nearly vertical on a cloud, occulting if possible and, if your aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate your landing?	Please train your searchlight on a cloud, occulting if possible and, if my aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate my landing.
QUR	Have survivors... 1) received survival equipment?  2) been picked up by rescue vessel 3) been reached by ground rescue party?	Survivors... 1) are in possession of survival equipment dropped by... 2) have been picked up by rescue vessel. 3) have been reached by ground rescue party.
QUS	Have you sighted survivors or wreckage? If so, in what position?	Have sighted... 1) survivors in water, 2) survivors on rafts, 3) wreckage, in position... latitude... longitude (or according to any other indication).
QUT	Is position of incident marked?	Position of incident is marked by... 1) flame or smoke float. 2) sea marker. 3) sea marker dye. 4) ...(specify other marking).
QUU	Shall I home ship or aircraft to my position?	Home ship or aircraft...(call sign) ... 1) to your position by transmitting your call sign and long dashes on...kHz (or MHz). 2) by transmitting on...kHz (or MHz) TRUE

		track to reach you.
QUV		
QUW	Are you in the search area designated as...(designator or latitude and longitude)?	I am in the...(designation) search area.
QUX	Do you have any navigational warning or gale warnings in force?	I have the following navigational warning(s) or gale warning(s) in force...
QUY	Is position of survival craft marked?	Position of survival craft was marked at...hours by... 1) flame or smoke float 2) sea marker 3) sea marker dye 4) ...(specify other marking).
QUZ	May I resume restricted working?	Distress phase still in force; restricted working may be resumed.
QVA-Q ZZ	The series QVA to QZZ inclusive has not been allocated to date.	



**DECODE****SECTION B - Z SIGNALS**

SIGNAL	QUESTION	ANSWER, ADVICE OR ORDER
ZAA		You are not observing proper circuit discipline.
ZAB		Your speed key is improperly adjusted.
ZAC		Cease using speed key.
ZAD		Your operating signal (made at...) received as...(1. Not understood; 2. Not held).
ZAE		I am unable to receive you. Receipt through..
ZAF	Will you patch me through to... (via you or...)?	I am about to patch you through to...(via...).
ZAG		Break...(1. Go ahead with next tape; 2. Go back...feet; 3. Advance your key tape to reference mark number and repeat last transmission (or transmission...).
ZAH		Unable to relay message...in present form (1. Not in prescribed format; 2. Format lines...incorrect; 3. No on-line facility available; 4. Call signs not encrypted; 5. Text not encrypted). We file. Transmit correctly prepared message to all addressees (or to...).
ZAI		Run...(1. Caller; 2. Test tape; 3. Synchronizing tape; 4. Traffic tape; 5. Marking signals; 6. Spacing signals; 7. Reversals; 8. Run teletypewriter space bar signals; 9. Date1 test at....bd).
ZAJ		I have (or...has) been unable to break you.
ZAK		Transmission on...kHz (or MHz) suspended until...(or was suspended at...) on account of electrical hazards (or...)
ZAL		I am closing down (until...) due to....
ZAM		I am unable to obtain reply from teleprinter switchboard...(for connection to...). Request you call him (or other intermediate switchboard) for me.
ZAN		Transmit only messages of and above precedence...
ZAO		I cannot understand your speech. Use

		radiotelegraph.
ZAP	Shall I work...(1. Simplex; 2. Duplex; 3. Diplex; 4. Multiplex; 5. Single Sideband; 6. With automatic error correction system; 7. Without automatic error correction system; 8. With time and frequency diversity modem)?	Work...(1. Simplex; 2. Duplex; 3. Diplex; 4. Multiplex; 5. Single Sideband; 6. With automatic error correction system; 7. Without automatic error correction system. 8. With time and frequency diversity modem).
ZAQ		The last word (or group)... (1. Received from you was...; 2. Transmitted to you was...).
ZAR		This is my...request (or reply). (1. First; 2. Second; 3. Third; etc.).
ZAS		Rerun all tapes run on...since... 1) Your present frequency; 2) ....kHz (or MHz); 3) Call sign...; 4) This channel or...channel.
ZAT		Am preparing traffic (perforating tape) for transmission.
ZAU	What is teletype range taken on my signal(s)?	Teletype range taken on your signal(s) is...to...
ZAV		Transmit traffic for me (or for...) by broadcast method until further directed (or until...).
ZAW	Shall I transmit 12 inches of blank tape at short intervals at... words per minute?	Transmit 12 inches of blank tape at short intervals at...words per minute.
ZAX		You are... 1) Causing interference. Listen before sending; 2) Causing interference by inattention to order to wait; 3) Sending at the same time as...(call sign); 4) Causing delay by slowness in answering; 5) Causing delay by slowness in answering my service or procedure messages; 6) Answering out of turn.
ZAY		Transmit traffic to me (or to...on ...kHz (or MHz)) without waiting for receipts. I (or...) will receipt for traffic later (on...kHz (or MHz))
ZAZ		One or more transmitters, simultaneously keying on this broadcast, are defective but

		transmission will continue on remaining transmitters. Traffic so transmitted will be repeated when full service is restored.
ZBA	What is cause of delay (or of bad transmission)?	Delay (or bad transmission) due to ...
ZBB		For following message you will require a total of...copies.
ZBC		You are transmitting a continuous ... (1. Mark; 2. Space).
ZBD	Will you repeat what you (or...) sent (at...)?	Following is what I (or...) sent (at...).
ZBE		Retransmit message... to... (for...) (1. Action; 2. Information).
ZBF		For following message use large message forms.
ZBG		You are transmitting in upper case.
ZBH		Make preliminary call before transmitting traffic.
ZBI		Listen for radiotelephony.
ZBJ	What are the estimated errors per thousand characters in my signals(or those of ....)?	The estimated errors per thousand printed characters in your signals (or those of...) is... 1) Greater than 13 2) 7 to 12 3) 1 to 6 4) Nil
ZBK	Are you receiving my traffic clear?	I am receiving your traffic... (1. Clear; 2. Garbled).
ZBL		Am unable to receive you while I am transmitting. Do not use break-in-procedure.
ZBM		Place...on watch on this frequency. 1) A qualified speed key operator; 2) A competent operator.
ZBN		Your...is reversed. (1. Tape; 2. Mark and space).
ZBO	Of what precedence(s) and for whom is (are) your message(s)?	I have (or...has)...(numeral followed by precedence prosign for each pre-precedence) message(s) for you (or for...).
ZBP		Your...(1. Characters are indistinct; 2. Spacing is bad).
ZBQ	When and on what frequency was message...received?	Message...was received at...on... kHz (or MHz).
ZBR	Shall I send by... 1) Direct (R) method; 2) Broadcast (F) method;	Send by... 1) Direct (R) method; 2) Broadcast (F) method;

	3) Intercept (I) method; 4) Repeat back (G) method?	3) Intercept (I) method; 4) Repeat back (G) method.
ZBS		Your... 1) Dots are too heavy; 2) Dots are too light; 3) Dots are varying in bias; 4) Dot spacing is bad; 5) Dots are missing; 6) Dots are blurring.
ZBT	How do you count following text group(s)...?	Text group(s)...should be counted as...group(s).
ZBU		Report when you are in radio communication with...
ZBV		Answer me (or...) on...kHz (or MHz).
ZBW	Will you shift (or ask...to shift) to transmit on...kHz (or MHz)?	I am (or...is) shifting to transmit on...kHz (or MHz).
ZBX	Will you shift (or ask... to shift) to receive on... kHz (or MHz)?	I am (or...is) shifting to receive on...kHz (or MHz).
ZBY		Pass... 1) On broadcast...; 2) On Broadcast...single operator; 3) On Broadcast...two operator period; 4) On Broadcast...general periods only.
ZBZ	What is the printing acceptability of my signals (or those of...)?	The printing acceptability of your signals (or those of...) is... 1) Unacceptable - totally corrupt; 2) Unacceptable - very corrupt; 3) Unacceptable - partly corrupt; 4) Acceptable - occasionally corrupt; 5) Acceptable - no corruption.
ZCA		Satellite(s) is/are pre-empted from .....Z to.....Z
ZCB		Change to double-hop working using satellites..... West and.....East now (or at .....hours).
ZCC		Establish.....on access..... channel (A/B) 1) 300 dB Emergency patch 2) Phase-reverse-keying.
ZCD		Weight your access to....(call sign) by.....dB
ZCE		Access satellite.....now (or at....hours) with..... 1) Spread Spectrum Modulation(normal allocation). 2) Spread Spectrum Modulator changed to access..... 3) Spread Spectrum Demodulator changed

		to access..... 4) Frequency modulation. 5) Phase Shift Keying Modulation.
ZCF		Remove access....now (or at...hours) 1) Spread Spectrum Modulation (1 - 40) 2) Frequency Modulation. 3) Phase-reverse-keying. 4) Phase Shift Keying Modulation.
ZCG	What is your frequency modulation deviation?	My frequency modulation deviation is.....
ZCH	What is your tracking mode?	My tracking mode is..... 1) Auto track. 2) Manual tracking. 3) Hand barring.
ZCI	What is your.....? 1) Total output power. 2) Quality meter reading. 3) Number of accesses. 4) Frequency modulation access power	My .... 1) is.....watts. 2) is.....% 3) is.....accesses. 4) is.....watts.
ZCJ	Are you experiencing equipment trouble?	I am experiencing trouble with my.... 1) Spread Spectrum Modulator. 2) Frequency division multiplex equipment. 3) Line modem 4) Time division multiplex equipment. 5) Switching or patching 6) Servo system. 7) Transmitter. 8) Receiver. 9) Parametric Amplifier. 10) Phase Shift Keying Modulator.
ZCK	Shall I loop my.....? 1) Spread Spectrum Modulator channel (A/B). 2) Line modem. 3) Time division multiplex equipment 4) Frequency division multiplex equip.	Loop your..... 1) Spread Spectrum Modulator Channel.... 2) Line modem. 3) Time division multiplex equipment 4) Frequency division multiplex equipment.
ZCL	Have you checked speed setting of all equipment on..... (channel/circuit)?	I have checked speed setting on..... (channel/circuit).
ZCM	May I carry out....on satellite.....? 1) Spread Spectrum Modulation back-to-back check. 2) Range measurement. 3) Power Balance.	Carry out....on satellite..... 1) Spread Spectrum Modulation back-to-back check. 2) Range measurement. 3) Power Balance.

ZCN	Are you ready to synchronize Spread Spectrum Access?	I am ready to synchronize Spread Spectrum Access.....
ZCO		On your FM/FDM Access..... 1) Suppress telegraph channel...(1 - 9) 2) Open telegraph channel..... (1 - 9)
ZCP		Change (total) radiated power..... 1) On narrow-band to.....watts. 2) On Spread Spectrum.....watts. Note: This power excluded that for access D or E. 3) Of access....(1-40, N1-N5, D or E) to.....(watts). 4) Of access....(1-40, RAE) to..... (0,3,6, 9 dB) below full access at Combiner Unit.
ZCQ		Change FM/FDM mode to Mode..... (A/D) with deviation.....kHz.
ZCR		I am about to initiate..... 1) Serial 2) Parallel synchronization of accesses.....and.....
ZCS		Switch your Spread Spectrum Access..... modulator to..... 1) Code off 2) Search 3) Sync. 1 4) Sync. 2 5) Traffic 6) Channel A Normal On 7) Channel B Normal On
ZCT		My Spread Spectrum Access demodulator is..... 1) CW tuned 2) In short-code lock 3) In long-code lock 4) In long-code and data-lock on Channel A only. 5) In long-code and data-lock on both channels.
ZCU		Set Spread Spectrum Access.....to..... 1) Channel A only. 2) Channel A and B retaining original radiated power for this access.
ZCV		Set speed of Spread Spectrum Access..... Channel.....(A/B) to..... 1) 1300 bd. 4) 1200 bd. 2) 2600 bd. 5) 2400 bd. 3) 600 bd. 6) 4800 bd.
ZCW		1) Check your....and advise

		2) I have lost..... 3) Perform back to back through.... 4) Bypass 5) I have bypassed 6) Retune demodulator To be used in conjunction with ZCX.
ZCX		1) Test loop 1 2) Test loop 2 3) Test loop 3 4) Test loop 4 5) Paramp 6) High Power Amplifier 7) Demodulator 8) Mux Channel A 9) Mux Channel B 10) Demux Channel A 11) Demux Channel B 12) Coder 13) Decoder 14) Tracking (including side lobe) 15) 5 MHz standard 16) Synthesizer 17) Power Supply 18) Modulator 19) Satellite 20) Crypto Equipment 21) Patching DC 22) Patching RF 23) Patching Clock
ZCY		Operate at....(BPS)..... 1) 75 2) 84 3) 150 4) 168 5) 300 6) 336 7) 600 8) 672 9) 1200 10) 2400 11) 4800 12) 9600 To be used in conjunction with ZCZ.
ZCZ		1) Coded 2) Uncoded 3) Satellite Access Channel at...dBW

		4) Relinquish Satellite Access due to sole access..... 5) Relinquish Satellite Access due to violation of Power restrictions. 6) Increase Power to....dBW 7) Decrease Power to....DBW 8) NB ALPHA 9) NB BRAVO 10) Change Satellite Access Channel to.....at DBW 11) Satellite
ZDA		I have a formal message for you(precedence is.....).
ZDB		Expedite reply(ies) to my... 1) Previous operating signal; 2) Request(s) for repetition and correction; 3) Service message.....
ZDC	Does the last message (or message...) require a signal of execution?	Last message (or message....) requires a signal of execution.
ZDD		Bring message...to the circuit.
ZDE		Message...undelivered... 1) Station closed until...Z; 2) Attempting alert station to re-open (for Flash or Immediate precedence only); 3) Will continue efforts to effect disposal; 4) Advise disposition; 5) Will not continue further efforts. Request cancel and file; 6) Give more complete address.
ZDF		Message...was: 1) Received by (addressee(s) designation) at...Z. 2) Received by (addressee(s) designation communications center at...Z. 3) Delivered to (addressee(s) designation) by broadcast at...Z. 4) Forwarded to (addressee(s) designation) by commercial means at...Z. 5) Mailed to (addressee(s) designation) at...Z
ZDG		Accuracy of following message(s) or (message...) is doubtful. Correction or confirmation will be forthcoming.
ZDH		Request corrected copy of message...be forwarded to...
ZDI		Place this message (or message...) on...(1.



		MERCAST; 2. MERCAST one operator period).
ZDJ	How many groups does your message contain?	I have a message containing.... groups to transmit to you (or to .....
ZDK	Will you repeat message... (or portion...) (or will you rerun number)?	Following repetition (of...) is made in accordance with your request.
ZDL		Confirmation...(1. Was omitted; 2. Differs from text).
ZDM		I am holding your message....
ZDN		Report disposal of message...your station with any reason for delay.
ZDO		I could not send message...to....
ZDP		Hold my message...until correctness is confirmed.
ZDQ		Message...was relayed to...by...at...(on...kHz (or MHz)).
ZDR		This is a multiple-address or book message tape containing...routing indicators in the routing line
ZDR		Which is to be routed in accordance with the established doctrine.
ZDS		Message (or message...) which you have (or...has) just forwarded was incorrectly transmitted. Correct version of message (or part or portion...) is...
ZDT		Exercise messages are not to be sent until further orders (or until...)
ZDU		Pass the following... 1) Private message (telegram); 2) Service telegram...) (Number of words charged for is...).
ZDV		Private message (telegram) received for...Request instructions
ZDW		In addition to the regular broadcast times, this hydrographic message is to be transmitted on the following hydrographic schedules...(1. .... schedule; 2. All schedules on... (date); 3. All schedules from... to...(dates inclusive)).
ZDX		Messages up to and including serial (or circuit) number...have been previously transmitted.
ZDY		Private messages (telegrams) are not to be sent until further orders (or until...).
ZDZ		On...(date) message(s) was (were) mailed to...(command(s)) bearing serial numbers...

ZEA		Pass plain language copy to... by secure means.
ZEB		This is a reprocessed ICAO message.
ZEC	Have you received message....?	Message...(1. Not received; 2. Unidentified-Give better identifying data).
ZED		The following confirmatory information as received is at variance with the text.
ZEE		Request message...be transmitted.
ZEF		This message has been read (received or intercepted) from a ship at sea.
ZEG		This message is not to be decrypted or reported outside the communication center in...(1. Aggressor force; 2. Friendly force).
ZEH		Accuracy of...portion of following message (or message...) is doubtful. Correction or confirmation will be forwarded when received. (1. Heading;- 2. Text; 3. Group..to..)
ZEI		Accuracy is doubtful of heading of message received as follows....Check to station of origin if necessary and repeat.
ZEJ		Replies to this message (or message ....) are to be sent now (or at...)
ZEK		No answer is required.
ZEL	Is message...a correction to message... which was previously transmitted with doubtful or missing groups (words)?	This message is a correction (to message...) (transmitted by...). Note: May only be used in conjunction- with ZDG.
ZEM		Reserved for Intelligence Community Use Only.
ZEN		This message has been delivered by a separate transmission or by other means (1. Messenger/ courier; 2. Mail) to the addressee(s) immediately following this operating signal.
ZEO		Transmit this message by rapid means when no charges are involved and to all others by mail.
ZEP		This message (or message...) was incompletely received. Each word or group missed, which is indicated by position of ZEP in the message, will be forwarded as soon as obtained.
ZEQ		Message...(or this message has been..... 1) Missent to this station. Received at...Z. Message protected; 2) Missent to this station and unable to

		<p>protect delivery due to... Request you re-transmit to the appropriate called station(s);</p> <p>3) Misrouted to this station and has been rerouted to...at...Z. Recommend corrective action;</p> <p>4) Misrouted to this station and unable to protect delivery (for...) due to... Request your station protect delivery;</p> <p>5) Routed to this station in format line2, but without delivery responsibility in format lines 7 or 8. Advise.</p> <p>6) Delayed due to misrouting, and is being retransmitted herewith.)</p>
ZER		This is a multiple-address or book message tape containing...routing indicators in the routing line for which the station called in the pilot is responsible.
ZES		Your message...has been received... (1. Incomplete; 2. Garbled). Request retransmission.
ZET		Message...has been protected and no further action by...is required.
ZEU		Exercise (drill) message.
ZEV	Request you acknowledge message.	Message (or message...) is acknowledged
ZEW		Your attention is invited, for... 1) Action; 2) Information), to message... which is in your files.
ZEX		This is a book message and may be delivered as a single-address message to addressees for whom you are responsible.
ZEY		This message (or message...) has been (or will be) put on the... broadcast schedules (serial number ....)
ZEZ		When delivery is effected of this book message to addressee by commercial means, or when copy is forwarded to confirm message previously delivered by telephone it is to be sent as a single address message. (May only be used in conjunction with ZEX.)
ZFA		Following message has been read (received or intercepted).
ZFB		Pass this message to... (1. on arrival; 2. On return to base).

ZFC	Have you received (or sent) the executive signal ("Execute") for message...?	Executive signal ("Execute") for last message (or following message) has been made (or was made at...).
ZFD		This message is a suspected duplicate.
ZFE		Pass message...(which is in your files) to addressee(s) for whom you are responsible using the indicated supplementary heading.
ZFF		Inform me when this message (or message...) has been received by... (addressee designation) or by... 1) Action addressee(s); 2) Information addressee(s); 3) All addressees; 4) Action addressee's/addressees' message center; 5) Information addressee's/ addressees' message center; 6) All addressees' message center). (NOTE: NOT AUTHORIZED FOR USE ON GENERAL MESSAGES).
ZFG		This message is an exact duplicate of a message previously transmitted and is to be delivered to all appropriate addressees served by the receiving communications facility.
ZFH		This message (or message...) is being (or has been) passed to you (or...) for... (1. Action; 2. Information; 3. Comment) (at the request of...)
ZFI	Is there any reply to message...?	There is no reply to message...
ZFJ		Message(s)...number(s)...not transmitted on this schedule (or on schedule...) are no longer needed.
ZFK	Does message...(or station serial number...) concern me (or...)?	Message...(or station serial number....) (1. Does not concern you(or...); 2. No longer concerns you (or...)).
ZFL	Was there any traffic addressed to me on...broadcast schedule between serial numbers... and....?	Following traffic was addressed to you on...broadcast schedule between serial numbers... and ...
ZFM		Message(s) serial number(s)...(to ...) which was (were) transmitted during unserviceability of one or more transmitters, simultaneously keyed, will now be repeated.
ZFN		
ZFO		Message...is being delivered as a Basegram message.

ZFP		Basegram.
ZFQ		Two messages (...and...) received under channel number (or station serial number) ... Both released.
ZFR		Cancel transmission...(made under channel or station serial number ...).
ZFS		Make message...same channel or station serial number as this procedure message.
ZFT		Message...received without channel number(s) (or station serial number) following message bearing channel number (or station serial number) ...Message released.
ZFU		Channel numbers...and...preceded message... Lower number recorded and higher number blanked.
ZFV		Message...containing channel number(s)...separated by portions of the message, released subject to correction. Take necessary action to provide corrected copy (to).
ZFW		BLANK channel number(s)...Forward message...as channel number...
ZFX		Channel number (or station serial number)...is open.
ZFY		
ZFZ		
ZGA	What is my call sign for use on this circuit only?	Your call sign for use on this circuit only is...
ZGB		Send (answer)...(1. In alphabetical sequence of call signs. Each station to make its call signs once (or...times); 2. In the following sequence of call signs).
ZGC		Station to station receipts are not required for this FLASH message (authorization for use must be prescribed by authorities controlling networks/systems).
ZGD		Two stations are using the same indefinite call sign on...kHz (or MHz). Both stations are to select different call signs.
ZGE		Send your call sign(s) once (or....times) on this frequency (or on...kHz (or MHz)).
ZGF		Make call signs more distinctly.
ZGG	What is call sign of... (1. Friendly striking force aircraft; 2. Friendly shadowing aircraft; 3. Incoming vessel;	Call sign of...is...(1. Friendly striking force aircraft; 2. Friendly shadowing aircraft; 3. Incoming vessel; 4. Senior officer present

	4. Senior officer present afloat (or Officer in tactical command); 5. Ship acting as flagship for...)?	afloat (or Officer in tactical command); 5. Ship acting as flagship for...).
ZGH		I am using this transmitter to answer calls on two or more frequencies. Answer to calls may be delayed.
ZGI		I am or have been (or...is or has been) calling you (on...kHz (or MHz)).
ZGJ	When will you call me again on present frequency (or on...kHz (or MHz))?	I will call you again as soon as possible (or at...) on present frequency (or on...kHz (or MHz)).
ZGK	When shall I call you again on present frequency (or on... kHz (or MHz))?	Call me again at...on present frequency (or on...kHz (or MHz)).-
ZGL		...will answer calls for me (or for ...).
ZGM	Did you (or...) hear... (at...)?	I have (or...has) been unable to communicate with...(since...).
ZGN	When was I (or...) last heard?	Nothing heard from you (or...) (since...)
ZGO	What is my number and sequence in answering?	Your number is...Answer after number-...(Numbers to be separated by separative sign).
ZGP		Answer calls for me on present frequency (or on...kHz (or MHz)).
ZGQ		
ZGR		
ZGS		
ZGT		
ZGU		
ZGV		
ZGW		
ZGX		
ZGY		
ZGZ		
ZHA	Shall I decrease frequency very slightly (or...kHz) to clear interference?	Decrease frequency very slightly (or...kHz) to clear interference.
ZHB	Shall I increase frequency very slightly (or...kHz) to clear interference?	Increase frequency very slightly(or...kHz) to clear interference.
ZHC		
ZHD		
ZHE		
ZHF		
ZHG		
ZHH		
ZHI		
ZHJ		
ZHK		

ZHL		
ZHM		
ZHN	How do you receive my automatic transmission?	Your automatic transmissions are...(1. Good; 2. Fair; 3. Unreadable).
ZHO	What is your speed of automatic-transmission in... (1. Revolutions per minute; 2. Words per minute; 3. Bauds).	My speed of automatic transmission in... (1. Revolutions per minutes; 2. Words per minute; 3. Bauds) is...
ZHP	What is preventing automatic reception?	Automatic reception is prevented by...
ZHQ		Please listen for me on...kHz (or MHz) and transmit to me on...kHz (or MHz).
ZHR	Is my speed of automatic transmission correct?	Your speed of automatic transmission- is... (1. Fast; 2. Slow; 3. Erratic; 4. Correct).
ZHS		
ZHT		
ZHU		
ZHV		
ZHW		
ZHX		
ZHY		
ZHZ		
ZIA		This message (or message...) is being (or has been) passed out of proper sequence of station serial numbers.
ZIB	Two messages...and... (or group counts and time of origin...and...), both received as serial number... What are correct serial numbers?	Change station serial number of message...to read number... or Assign to message...station serial number...
ZIC	What is (are) station serial number(s) or channel number(s) of last message(s) you transmitted to me (or to...)?	Station serial number(s) or channel number(s) of last message(s) transmitted to you (or to...) is (are)...
ZID	What is (are) station serial number(s) or channel number(s) of last message(s) received from me (or from...)?	Station serial number(s) or channel number(s) of last message(s) received from you (or from...) is(are)...
ZIE		Station serial number(s) or channel number(s) (from...) has (have) not been received. Repeat message(s) or cancel serial number(s) or channel number(s).
ZIF		I (or...) did not use serial number(s).
ZIG	Is (are) number(s)... (to...) blank?	Number(s)...(to...) is (are) blank.
ZIH		Repeat headings of message number ...to...transmitted by you (or...) to check

		serial numbers.
ZII	What was...of your (or...'s) number...? (1. Date- time group; 2. Filing time)?	My (or...'s) number...had following... (1. Date-time group; 2. Filing time).
ZIJ		I am now changing my channel number/letter. Last number sent in this series is that of this message.
ZIK		This is a weather controlled message which is not to be transmitted in the clear over radio circuits.
ZIL	What Channel Number(s) should I use?	Use Channel Number(s)....
ZIM		
ZIN		
ZIO		
ZIP		Have set continuous watch, or 1) Single operator period; 2) Two operator period; 3) General periods only; 4) Reduced single operator periods) on broadcast indicated. First serial number received is.../No number yet received
ZIQ		Have ceased watch on Broadcast, last number received...
ZIR		
ZIS		
ZIT		
ZIU		
ZIV		
ZIW		
ZIX		
ZIY		
ZIZ		
ZJA		Read signaling light of...
ZJB	May I close down visual watch now (or at...)?	Close down visual watch now (or at...).
ZJC		Repeat all flag signals made by the senior officer (senior officer present afloat).
ZJD		Use...(1. Better light; 2. Better background).
ZJE		Set visual watch now (or at...)
ZJF		Visual relaying station between senior officer (senior officer present afloat) (or...) and...is to be .....
ZJG		Repeat all flashing (or semaphore) messages made by the senior officer (senior officer present afloat).
ZJH		Your light is unreadable...(1. Not trained



		correctly; 2. Not bright enough; 3. Too bright).
ZJI	What are the call signs of the ships in company with you?	Call signs of the ships in company with me are...(For visual use only).
ZJJ		Use double-flash procedure.
ZJK	Are you (or is...) visual guard for...?	I am (or...is) visual guard for...
ZJL		Hoist the following signal.
ZJM		1) Flaghoist; 2) Semaphore; 3) 20 inch signaling projector; 4) 10 inch signaling projector; 5) ALDIS; 6) Intermediate; 7) Heather; 8) Daylight signaling lantern; 9) Masthead flashing light; 10) Infrared; 11) Signal search light; 12) Omni-directional flashing light. 13) Directional flashing light.
ZJN		Message...has been passed to those for whom I am responsible (or to...) (at...) but "L" has not been received.
ZJO		Repeat back each group of the text of this message as it is transmitted.
ZJP		Message which follows is to be encrypted and passed to all addressees (by...). (Only to be used by visual not liable to interception).
ZJQ		Repeat signal (or message...) the senior officer (senior officer present afloat) (or ship indicated) is now transmitting or is about to transmit.
ZJR		Only semaphore is to be used for visual signaling between...and ...(or from...).
ZJS		Directional lights of minimum brilliancy are to be used for all visual traffic between...and... except for messages of precedence priority and above requiring transmission to two or more ships.
ZJT		Broadcast transmitter indicated is about to be taken off for... minutes (or until...).
ZJU		
ZJV		
ZJW		
ZJX		
ZJY		

ZJZ		
ZKA	Who is controlling station (net control station) on this frequency (or on...kHz (or MHz))?	I am (or...is) controlling station (net control station) on this frequency (or on...kHz (or MHz)).
ZKB	Is it necessary to obtain the permission of the controlling station (net control station) before transmitting messages?	It is necessary to obtain the permission of the controlling station (net control station) before transmitting- messages.
ZKC		Substitute code sign (call sign) of control station of group (net) in place of this operating signal.
ZKD	Shall I take control of net (for...) (until...)?	Take control of net (for...) (until...)
ZKE		I (or...) report(s) into circuit (net).
ZKF		Station leaves net temporarily (or for...minutes) (to communicate with...) (will be on...kHz (or MHz)).
ZKG		Observe (or direct...to observe) schedule with...on...kHz (or MHz) (at...).
ZKH	Did you (or...) observe schedule with... (at...)?	I (or...) observed schedule with...(at...).
ZKI		Set watch on...kHz (or MHz)... (1. Continuous; 2. Until further notice).
ZKJ	May I close down (until...)?	...(1. Close down (until...); 2. I am closing down (until...)).
ZKK		Assume radiotelegraph (wireless) organization...forthwith (or at...)
ZKL		Resume normal radio communication now (or at...).
ZKM		Take guard (for...) (on...kHz (or MHz)).
ZKN		I have taken over guard on...kHz (or MHz).
ZKO		I have handed over guard (to...) (on...kHz (or MHz)) (serial number of last message received was...).
ZKP	Are you (or is...) radio guard for...(on...kHz(or MHz))?	I am (or...is) radio guard for... (on...kHz (or MHz)).
ZKQ		Indicate ships or stations for which you are (or...is) ...guard. (1. Radio (on...kHz (or MHz)); 2. Visual).
ZKR	On what frequencies are you (or...) maintaining watch?	I am (or...is) maintaining watch on...kHz (or MHz).
ZKS	What stations are keeping watch on...kHz (or MHz) (or are in net)?	Following stations are keeping watch on...kHz (or MHz) (or are in net).
ZKT		Am keeping watch on...kHz (or MHz) for... 1) First five minutes in each half hour; 2) From 10 to 15 and 40 to 45 minutes past

		the hour; 3) Between...and...minutes past the hour).
ZKU		I am (or...is) maintaining continuous watch, or 1) Single operator period; 2) Two operator period; 3) General periods only; 4) Reduced single operator period) on...(call sign)... Broadcast.
ZKV		I am (or...is) standing split-phone watch on...and...kHz (or MHz).
ZKW		
ZKX		
ZKY		
ZKZ		
ZLA		I have pictures of the following types to transmit... 1) Photographs; 2) Weather maps; 3) Blueprints; 4) Printed matter; 5) Test.
ZLB	What drum rotation speed shall I use?	Transmit at...revolutions per minute. (1. 30; 2. 45; 3. 50; 4. 60; 5. 90; 6. 100).
ZLC		Your transmission... 1) Shows objectionable modulation; 2) Suitable for communication but not for picture; 3) Shows caption too close to edge of picture; 4) Shows buckled print; 5) Shows fork drift; 6) Picture shows too much contrast; 7) Picture shows insufficient contrast; 8) Picture shows cross-over).
ZLD		I am unable to... 1) Synchronize with you; 2) Transmit pictures; 3) Copy pictures.
ZLE		Send... 1) Fence; 2) White; 3) Black; 4) Picture; 5) Synchronize; 6) Fence swinging black until I stop you;

		7) Fence swinging white until I stop you).
ZLF		...( <ol style="list-style-type: none"> <li>1) Inverter;</li> <li>2) Converter;</li> <li>3) 96-line 12 x 18 transceiver;</li> <li>4) 100-line transceiver.);</li> <li>5) 300-line transceiver).</li> </ol>
ZLG	Shall I transmit... (1. Negative-2. Positive)?	Transmit...(1. Negative; 2. Positive).-
ZLH	Will you transmit map(s)...(...area...time....type).	I am going to transmit map(s)... (...area...time...type).
ZLI		Reverse material on drum and rerun until I break you.
ZLJ	What size lettering shall I use?	Use...1. Standard telegraphic typewriter; 2. Jumbo typewriter if available; 3. Hand lettering at least 3/16 of an inch high).
ZLK		
ZLL		
ZLM		
ZLN		Facility indicated cannot be operated at present.
ZLO	Is (are) facility(ies) ...operative at your station (or at...)?	The following...facility(ies) is (are) operative at this station (or at...). <ol style="list-style-type: none"> <li>1) Homing beacon;</li> <li>2) Radar beacon;</li> <li>3) Revolving and/or flashing beacon;</li> <li>4) Radio beacon;</li> <li>5) Instrument landing system;</li> <li>6) Ground control approach;</li> <li>7) Approach Control;</li> <li>8) Tower transmitter (state which type LF, MF, VHF, or UHF);</li> <li>9) MF Direction finder;</li> <li>10) VHF Direction finder;</li> <li>11) UHF Direction finder;</li> <li>12) Runway lights;</li> <li>13) Sandra lights;</li> <li>14) Radio track guide;</li> <li>15) Radio range).</li> </ol>
ZLP	What is (are) the magnetic line(s) of shoot of the...(facility)?	The magnetic line(s) of shoot of the...(facility) is (are)...degrees.
ZLQ		
ZLR		
ZLS		
ZLT		
ZLU		

ZLV		
ZLW		
ZLX		
ZLY		
ZLZ		
ZMA	What was bearing of unknown station (or station using call sign...) at... (time) (on...kHz (or MHz))?	Bearing of unknown station (or station using call sign...) was... (at...time) class...(on...kHz (or MHz)).
ZMB		Bearing of you (or of...) was... (class...) from me (or from...) at...(time).
ZMC		Bearing of station which answered message (or transmission) from... was...(at...(time)) class... (on...kHz (or MHz)).
ZMD		1. Your bearing appears to be between...degrees and ...degrees, and sense indicates you are to the ...(direction) of this station; 2. Your bearing is changing rapidly.
ZME		Pass in direction finding bearing (of...) obtained on...kHz (or MHz) (or between...and...kHz (or MHz)).
ZMF	Will you endeavor to obtain a direction finding bearing of station now transmitting (or of...) (on...kHz (or MHz))?	Bearing of station now transmitting (or of...) (on...kHz (or MHz)) was...(class...) sense determined at...
ZMG		This bearing (course or position) is unreliable. Error in excess of class C bearing (or position) may amount...degrees or miles).
ZMH		Surface craft using call sign... cooperating. Change to...kHz (or MHz) and follow direction finding procedure when called.
ZMI	Will you send your call sign and dashes of five-seconds duration at intervals in order that I (or...) may home on you?	I am about to send my call sign and dashes of five-seconds duration at intervals in order that you (or...) may home on me.
ZMJ		Check... 1) Correctness of last QDR; 2) Sense of last QDR; 3) Correctness of last QDM; 4) Sense of last QDM).
ZMK		Cannot determine your (or...'s... (1. Position; 2. Bearing).
ZML		Steer...degrees for 2 minutes if possible and send call sign and long dashes while you are so doing.
ZMM		Increase height to enable more accurate bearing to be completed.

ZMN		Change over to loop direction finding on...kHz (or MHz) (and home on transmissions made by...).
ZMO	What is my position by direction finding bearing from nearest landmark (or from...)?	Your position by direction finding cross bearings from nearest landmark (or from...) is...(class...) at...(hours).
ZMP		Endeavor to plot position from bearings taken on station(s) now transmitting (or of...) (on...kHz (or MHz)).
ZMQ		Cannot determine your position, you are in line or nearly in line with direction finding station baseline.
ZMR		Take over direction finding guard as previously ordered (on...kHz (or MHz)) (from...to...kHz (or MHz)).
ZMS		Carry out short direction finding procedure (as locally pre-scribed).
ZMT		Sense determination unreliable, bearing may be reciprocal.
ZMU		...(1. Listen (for...) on direction finding on... kHz, (or MHz) (or between...and...kHz (or MHz)); 2. Shift to direction finding frequency...and listen for call sign...).
ZMV	What is the Grid Course for me to steer to reach you (or...)?	The Grid Course for you to steer to reach me (or...) is...degrees at...hours.
ZMW		
ZMX		
ZMY		
ZMZ		
ZNA		You are encrypting...incorrectly. (1. Operating signals; 2. Radio call signs; 3. Address groups).
ZNB	What is authentication of... (1. Message...; 2. Last transmission; 3. ....)?	Authentication (of...) is... (1. Message...; 2. Last transmission;- 3. ...).
ZNC		All transmissions will be authenticated-...(1. On all circuits; 2. On this circuit; 3. On...frequency).
ZND		You are using authenticator incorrectly... (1. Verify authenticator system key. 2. Check authentication of your last transmission).
ZNE		I am prepared to authenticate.
ZNF		Addressees who are not holders of the cryptographic system employed in the text need not decrypt (decipher), but shall sight

		(read) translation at first opportunity and obtain copy if applicable.
ZNG		Commands who are included in the collective address used in this heading, who are not holders of the cryptographic system employed in the text, are exempted.
ZNH		Plain-text tape of this message should be prepared during process of decipherment.
ZNI		Shift to...(1. On-line; 2. Plain) operation now
ZNJ		This message has been transmitted under serial number...at... by station whose designation follows ...(1. By on-line cipher; 2. By off-line encryption).
ZNK		Addressees who do not hold cryptographic facilities are exempted.
ZNL		Receiving Cryptographic Office concerned should refer queries relating to the text of this message (e.g., requests for verification) to... (address designators except plain language). Note: To be used in codress messages when necessary to indicate originating Crypto Center and then normally limited to messages of Immediate precedence and above.
ZNM		Originator authorizes the transfer of this message into the secure networks of all authorities addressed, provided the networks are approved for the security classification of the message involved.
ZNN		
ZNO		Unable to decrypt message...(from indefinite call sign...). Note: Only to be used under circumstances laid down in cryptographic instructions.
ZNP		Transfer operation of channel now to...(1. Normal; 2. Top Secret; 3. Conference; 4. Engineering) on-line cipher operation. Note: This signal is for use only when already in on-line cypher operation.
ZNQ		This message (or message...) received at this station...(1. Without authentication (when authentication is in force); 2. Incorrectly Authenticated; 3. Correctly authenticated.)
ZNR		This message may be forwarded without

		change by radio or non-approved circuit. Note: The letter U repeated five times following this operating signal indicates that the message which follows is unclassified or is acceptable for transmission over any circuit in its present form.
ZNS		Following message has been authenticated... (This signal is for use only over approved/on-line circuits).
ZNT		Following message has NOT been authenticated...(This signal is for use only over approved/on- line circuits).
ZNU		Gateway commcen re-protect this message and re-encrypt using RACE/AROFLEX off-line system.
ZNV		Gateway commcen re-protect this message and re-encrypt using BEDERAL off-line system.
ZNW		This message has been decrypted and re-encrypted at a gateway commcen.
ZNX		You have disclosed an EEFI as indicated: 1) Position      6) COMSEC 2) Capabilities   7) Wrong Circuit 3) Operations    8) (SPARE) 4) EW            9) (SPARE) 5) Personnel     10) (SPARE) *NOTE: See ACP 124 for details of BEADWINDOW procedure and the use of EEFI numbers.
ZNY		Do not forward this message unencrypted by radio or non-approved circuit. Note: A letter repeated five times following this operating signal indicates the classification for which the circuit must be approved before the message can be forwarded over it.
ZNZ		Originator has indicated that this message should be forwarded without service action on the text at relay or addressee stations, as the information conveyed is...(1. Perishable; 2. For information only and will be confirmed by other means).
ZOA		Relay this message (or message...) by visual (to...).
ZOB		Take (I will take) no further action regarding forwarding message...



ZOC		Station(s) called relay this message to addressees for whom you are responsible.
ZOD		Act as radio link (relaying station) between me and...(or between...and ...).
ZOE	Can you accept message for...? (1. on line; 2. Off line).	Give me your message. I will dispose of it... (1. on line; 2. Off line).
ZOF		Relay (pass) this message (or message...) to...now (or at...).
ZOG		Transmit (pass) this message (or message...) to...(for...) (1. Action; 2. Information).
ZOH		Send message for...on...kHz (or MHz) by... (1. Receipt method; 2. Broadcast method; 3. Intercept method).
ZOI		Pass this message to the nearest (or...) weather central/control.
ZOJ		This is corrected version number...(1. One; 2. Two; etc.) of a message previously transmitted with errors and/or omitted portions.
ZOK		Relay this message via...
ZOL		I will relay your call sign to senior officer present afloat, whose call sign is...
ZOM		Delivery of this message by mail in lieu of broadcast permissible (to...).
ZON		Place this message (or message...) on.. 1) Continuous wave broadcast; 2) Radioteletype broadcast) indicated by following specific broadcast designator(s)...
ZOO		Place this message (or message...) on MERCAST indicated by following specific broadcast designator(s)...
ZOP		This message (or message...) has been delivered to all broadcast areas (or to the following specific broadcast area(s)...).
ZOQ		Deliver this message (or message ...) to all broadcast areas (or to the following specific broadcast area(s)...).
ZOR		1) Route traffic for...via...area broadcast. 2) Beginning at... traffic for you (or...) will be routed via...area broadcast.
ZOS	Request area routing for messages for...?	Area routing for messages for... is...
ZOT		Transmit or handle this message at the lower precedence to the station or address designator(s) which follow(s).

ZOU	How should traffic for... be routed?	Route traffic for...through... (on...kHz (or MHz)).
ZOV		Station designation preceding this operating signal is the correct routing for this message rerouted by...
ZOW		Broadcast this message at special watch keeping periods for ships with (1. One radio operator; 2. Two radio operators).
ZOX		Place this message (or message....) on... (1. Morse/CW; 2. RATT) submarine broadcast indicated by following specific broadcast designator(s)....
ZOY		Relay this message only to the station(s) whose designation(s) precede this operating signal.
ZOZ		Relay this message (or message...) in its present form without decryption.
ZPA		Your speech is distorted.
ZPB		Your transmitter has strong radiation while idling.
ZPC		Your signals are... 1) Fading badly; 2) Fading slightly; 3) Good for...words per minute; 4) Getting stronger; 5) Getting weaker).
ZPD	Is your signal as checked by monitor...satisfactory (1. Locally; 2. As radiated)?	My signal as checked by monitor... is satisfactory (1. Locally; 2. As radiated).
ZPE		Maximum power is now being radiated
ZPF	What is the readability of the signals of the group (net) (or of...)?	The readability of the signals of the group (net) (or of...) is... (1 to 5).
ZPG	What is (are) signal strength(s) of group (net) (or of...)?	Signal strength(s) of group (net) is (are) (or of...) is... (1 to 5).
ZPH		This interrupted transmission is canceled. A complete retransmission from this station will follow without request.
ZPI		
ZPJ		This is a SUBOPAUTH edited version, either addressees and/or non-essential text have been removed from this message. Subsequent delivery of the originators unedited message is not intended unless re-requested.
ZPK		This is a SUBOPAUTH edited version, either addressees and/or non-essential text have been removed from this message. The

		originators unedited message will be delivered by other means.
ZPL		Request unedited versions of edited messages, broadcast number(s)....be forwarded by means other than the submarine broadcast.
ZPM		
ZPN		IFF switched ON in distress position.
ZPO		The text of this message is to be relayed in precisely the same format as that in which it is received. No characters or machine functions are to be added, inserted or deleted and the relative positions of the groups are to be retained.
ZPP		Message which follows is a submarine surfacing signal to be cleared on calling frequency.
ZPQ		
ZPR		I have ...messages (precedence) prepared in tape relay format for you (or for...). (Consideration should be given to receiving this message directly on to a printing perforator/typing reperforator).
ZPS		This message may be held until (DTG)
ZPT		This transmission is a transmitter pre-acceptance trial. Request expeditious strength and readability reply.
ZPU		If more than one tropical wind warning message in this sequence is awaiting transmission, transmit highest serial number first. (Sequence/serial is understood to include tropical warning name or number and consecutive warning number).
ZPV		If the earlier wind warnings identified by DTG(s) following this signal are awaiting transmission, file those warnings without further transmission.
ZPW		This message canceled at time indicated. File without further transmission.
ZPX		This message (or message....) is forwarded to you for screening and determination of need for broadcast promulgation. Advise broadcast control commander of recommended message disposition.
ZPY		This message (or message.....) has been screened by command authority and

		requires broadcast delivery.
ZPZ		This message has been forwarded...(number of times) by stations within this network. Note: The number shall be incremented by one each time the message is relayed within the network. The OPSIG will be removed prior to the message exiting the network).
ZQA		The landing lights at the aerodrome (or at the aerodrome at...) are out of order.
ZQB	What is the magnetic direction in which landing is to be made?	The magnetic direction in which landing is to be made is... degrees.
ZQC	Are you (or is...)... (1. Airborne; 2. Waterborne; 3. On land)?	I am (or...is) ...at...(time). (1. Airborne; 2. Waterborne; 3. On land).
ZQD	Am I to carry out the procedure appropriate to the use of the ...(facility)?	You are to carry out the procedures appropriate to the use of the... (facility).
ZQE	What is your desired rate of descent expressed in hundreds of feet per minute?	My desired rate of descent is... hundreds of feet per minute.
ZQF	What is the length in yards of the runway in use?	The length of the runway in use is...yards.
ZQG		
ZQH		
ZQI		
ZQJ		
ZQK		
ZQL		
ZQM		
ZQN		
ZQO		
ZQP		
ZQQ		
ZQR		
ZQS		
ZQT		
ZQU		
ZQV		
ZQW		
ZQX		
ZQY		
ZQZ		
ZRA	How does my frequency check?	Your frequency is... 1) Correct; 2) Slightly (or...Hz (or kHz)) high; 3) Slightly (or...Hz (or kHz)) low;

		4) Stable on steady mark; 5) Stable on steady space; 6) Unstable; 7) Erratic.
ZRB		Check your (or...'s) frequency on this circuit (or on...kHz (or MHz)).
ZRC	Shall I tune my transmitter to... (1. Proper frequency;- 2. Zero beat with your (or...) transmitter)?	Tune your transmitter to... (1. Proper frequency; 2. Zero beat with my (or...) transmitter).
ZRD	What is the frequency of the...radio facility now in operation?	The frequency of the...radio facility now in operation is...
ZRE	On what frequency do you hear me best?	I hear you best on...kHz (or MHz).
ZRF	Will you send tuning signal on your present frequency(or on...kHz or (MHz)) for 1 minute, or until AS is given?	Am about to send tuning signal on my present frequency (or on...kHz (or MHz)).
ZRG	When will a change of frequency (to...kHz (or MHz)) be necessary?	A change in frequency (to...kHz (or MHz)) will be necessary at approximately...
ZRH	Is my frequency shift correct?	Your frequency shift is...(1. Too wide; 2. Too narrow; 3. Not linear; 4. Correct) (by Hz).
ZRI		
ZRJ	Will you check your...?	I will check my...
ZRK	Shall I revert to single channel working?	Revert to single channel working.
ZRL	Are you working on the correct code? NOTE: This meaning applies only to frequency shift duplex.	I am working on the correct code. NOTE: This meaning applies only to frequency shift duplex.
ZRM	Can you receive both sidebands of my independent sideband transmissions?	I can receive...(1. The upper sideband; 2. The lower sideband; 3. Both sidebands).
ZRN	Do you intend to transmit on... 1) The upper sideband; 2) The lower sideband; 3) Both sidebands independently)?	I intend to transmit on... 1) The upper sideband; 2) The lower side-band; 3) Both sidebands independently.
ZRO	Can you read me on...(1. Channel A...; 2. Channel B...; 3. Channel(s)...; 4. All channels)?	I can read you on...(1. Channel A; 2. Channel B; 3. Channel(s); 4. All channels; 5. No channels).
ZRP		Transfer signal on channel...to channel... (Should only be used when order originates from a third working channel. See ZRV for use between directly connected working channels).
ZRQ		Change to other sideband.
ZRR		Message(s) ...number(s)...will no longer be broadcast but are effective and of interest (to

		units indicated).
ZRS		Your carrier is...(1. Over- suppressed; 2. Under-suppressed).
ZRT		Radiate full unmodulated power for...minutes.
ZRU	Are my tone frequencies correct?	Your tone for...( 1) Marking and spacing are high; 2) Marking and spacing are low; 3) Marking and spacing are correct).
ZRV		Transfer signal to channel...
ZRW		Retransmit phasing signal.... 1) You did not synchronize 2) Check your daily key setting
ZRX		
ZRY		
ZRZ		
ZSA	May I ascend to...(height)?	You may ascend to...(height).
ZSB	May I descend to...(height)?	You may descend to...(height).
ZSC		Switch on IFF.
ZSD		IFF switched OFF.
ZSE	Do you have glider in tow?	...(1. We have glider in tow; 2. We are forced to release glider at (approximate position)...).
ZSF		Switch off...(1. IFF; 2. IFF sets for 10 minutes in area denoted except for ships whose call signs follow).
ZSG	May I make an approach using the facility indicated?	You may approach using the facility indicated.
ZSH		
ZSI		You are...(1. To maintain height of...feet and report over...(call sign) range station; 2. To hold on...leg of the beam...(call sign) range station at height...feet).
ZSJ		
ZSK		
ZSL		
ZSM		
ZSN		
ZSO		Send tapes (or message)...(1. Once; 2. Twice).
ZSP		
ZSQ		
ZSR		
ZSS		
ZST		

ZSU		
ZSV		
ZSW		
ZSX		
ZSY		
ZSZ		
ZTA		...1) Radio; 2) Visual; 3) Land line; 4) Teletypewriter (Teleprinter); 5) Telephone; 6) Automatic; 7) Facsimile; 8) Shore telephone; 9) Shore teleprinter; 10) Radio teletypewriter. 11) Satellite.
ZTB		...1) Transmitter-distributor; 2) Autohead; 3) Perforator; 4) Reperforator; 5) Printer; 6) Undulator; 7) Keyboard; 8) Frequency shift keyer; 9) Multiplexing carrier base; 10) On line Crypto device).
ZTC	...(1. Does my...appear to be faulty; 2. Is your...faulty)?	...(1. Your...appears to be faulty; 2. My...is faulty).
ZTD	Shall I use....?	Use....
ZTE	Are you (or is...) able to use...?	I am (or...is) able to use...
ZTF	Are repairs completed?	Repairs ....(1. Completed; 2. Uncompleted. Estimated completion time...minutes; 3. Can not be completed because...)
ZTG		...(class of emission/type of transmission as indicated in Chapter 6).
ZTH		
ZTI		...(1. Receiver; 2. Transmitter; 3. Power supply; 4. Antenna system; 5. Radio direction finder).
ZTJ		Cease using...
ZTK	Are you (or is...) connected to...?	I am (or...is) connected to...
ZTL	Are you (or is...) about to disconnect?	I am (or...is) about to disconnect.
ZTM		I am (or...is) unable to use...
ZTN	What is my bias distortion?	Your bias distortion is... (1. Excessive; 2. ...percent (mark- ing); 3. ...percent

		(spacing); 4. ...percent (total distortion).
ZTO	Is my character formation correct?	Your character formation is... 1) Correct; 2) Defective in the start element; 3) Defective in the 1st unit; 4) Defective in the 2nd unit; 5) Defective in the 3rd unit; 6) Defective in the 4th unit; 7) Defective in the 5th unit; 8) Defective in the stop element).
ZTP	What is the duration of your modulation cycle?	The duration of my modulation cycle is... <u>50 Baud Equipment</u> 1) 148 milliseconds (7.42 units) fast. 2) 150 milliseconds (7.5 units) correct. 3) 152 milliseconds (7.6 units) slow. 4) ...erratic per character <u>45.5 Baud Equipment</u> 1) 161 milliseconds (7.35 units) fast. 2) 163 milliseconds (7.42 units) correct. 3) 165 milliseconds (7.5 units) slow. 4) ...erratic per character.
ZTQ	Will you...(1. get the Circuit Engineer/Facility Control Technician to speak on this circuit (or circuit...); 2. Hand the line over to the Circuit Engineer/ Facility Control Technician for check)?	I will...(1. get the Circuit Engineer/Facility Control Technician to speak on the circuit; 2. Hand the line over to the Circuit Engineer/Facility Control Technician for check and call you when check has been completed).
ZTR	Will you... (1. Disconnect your equipment from line and carry out local test, reconnecting to line in...minutes;  2. Connect your transmit line to your receive line to enable me to carry out a loop test for...minutes)?	I will... (1. Disconnect (or I am disconnecting) my equipment from line and carry (or to carry) out local test reconnecting to line in...minutes;  2. Connect my transmit line to my receive line to enable you to carry out a loop test for... minutes).
ZTS	Is the line satisfactory?	The line is...(1. Satisfactory; 2. Unsatisfactory).
ZTT		Fixed Aerial 1) Omni-directional .... 2) Rotatable 3) Directional
ZTU		
ZTV		
ZTW		
ZTX		
ZTY		



ZTZ		
ZUA	Request a timing signal now (or at...)	Timing signal will be transmitted now (or at...). The numerals indicating the time will be followed by a five-second dash terminating exactly at the time indicated.
ZUB		At...
ZUC		From...to...
ZUD		Until further orders (or until...)
ZUE		Affirmative (Yes).
ZUF		Air Raid...(1. Warning; 2. In progress; 3. All clear).
ZUG		Negative (No).
ZUH		Unable to comply.
ZUI		Your attention is invited to...
ZUJ		Stand by.
ZUK	...(Appointment Code) desires key conversation on this circuit with... (Appointment Code). Will	...(Appointment Code) is now ready to begin key conversation with...(Appointment Code). you indicate when you are ready?
ZUL		
ZUM		
ZUN		
ZUO		
ZUP		
ZUQ		
ZUR		
ZUS		
ZUT		
ZUU		
ZUV		
ZUW		
ZUX		
ZUY		
ZUZ		
ZVA		Station called is responsible for relay or delivery to all stations in line two (2) or to stations indicated.
ZVB	What was your time over last compulsory reporting point, and ETA at next compulsory reporting point?	My time over last compulsory reporting point was...and my ETA at next compulsory reporting point is...
ZVC		
ZVD		
ZVE	What are the security conditions of your termination(s) of this channel (or...channel/ circuit designated)?	Security conditions at my termination of this channel (or... channel/circuit designated) are... 1) Secured for Restricted;

		2) Secured for Confidential; 3) Secured for Secret; 4) Secured for Top Secret Note: The answer to this signal may only be passed on circuits cleared for classified traffic.
ZVF		This channel (or...channel/circuit designated) is unserviceable for classified traffic.
ZVG		
ZVH		
ZVI		
ZVJ		
ZVK		
ZVL		
ZVM		
ZVN		
ZVO		
ZVP		
ZVQ		This message, relating to a warning, an alert, distress, or an emergency, is authorized to be relayed via the facilities of your network without prior arrangement.
ZVR		Retransmit this message (or message...) at once to all subordinate stations.
ZVS		
ZVT		
ZVU		
ZVV		
ZVW		
ZVX		
ZVY		
ZVZ		
ZWA		
ZWB		Indicate name of... 1) Operator on watch; 2) Senior rating on watch; 3) Operator who transmitted last message (or message...)). NOTE: This signal is authorized for use in connection with operator training only; it may not be used for any other purpose.
ZWC		The following is to be taken as applying to personnel on watch only.
ZWD		Carry out communication...(visual exercise

		number...at...senior officer (or...) is to conduct.
ZWE		Voluntary exercise (number...) may be carried out now (or at...).
ZWF		Incorrect.
ZWG		You are correct.
ZWH		Try again.
ZWI		Answer last question (or question ...).
ZWJ		Stations are to answer...taking the following duties...A,...B,...C...etc.
ZWK		Following is answer to the last question (or question...).
ZWL		No forwarding action to the designation(s) immediately following is required.
ZWM		Correct answer to last question (or question...) is...(or will be found in...).
ZWN		Correct version of the part of the last message (or message...) which was sent incorrectly is... (or will be found in...).
ZWO		Following message (or question, or exercise is for the exercise of...(1. Junior operators; 2. Senior operators; 3. Ratings on watch).
ZWP		A junior operator is to carry out ... (1. A standard flashing exercise; 2. A standard semaphore exercise; 3. A standard radio-telegraphy transmitting exercise; 4. A standard radiotelegraphy receiving exercise).
ZWQ		
ZWR		
ZWS		
ZWT		
ZWU		
ZWV		
ZWW		
ZWX		
ZWY		
ZWZ		
ZXA		The following group is a call sign, delivery group or address group. (Used in plain language texts of messages other than procedure messages.)
ZXB		Station(s) to whom this message is routed obtain a complete copy of this interrupted transmission by addressing a service

		message to the originating station.
ZXC		This transmission has been interrupted. A retransmission will follow without request. (Must be followed immediately by valid end of message sequence).
ZXD		This message is to be delivered to the addressee(s) in tape form.
ZXE		Reserved for future use by NACOSA/ISSC.
ZXF		1. For peacetime operations: This message has been generated/mediated by a COSMIC TOP SECRET ATOMAL System High SCARS II System. The Maximum security classification authorized without off-line encryption released from SCARS II into the NICS TARE network is NATO SECRET. ATOMAL information at any security classification level released into the NICS TARE network requires also off line encryption. 2. For TTW/Wartime operations after authorization from Operational Commander: This message has been generated/mediated by a COSMIC TOP SECRET ATOMAL SYSTEM HIGH SCARS II SYSTEM
ZXG		This MSG has been generated/mediated by a NATO CONFIDENTIAL System High automated data processing system.
ZXH		This MSG has been generated/mediated by a NATO SECRET System High automated data processing system.
ZXI		This critical SCARS II MSG should be given precedence over other Flash messages. Note: Signals listed are reserved for use by NACOSA
ZXJ		
ZXK		Station called relay this message (or message...) to...in addition to predetermined responsibilities.
ZXL		
ZXM		
ZXN		
ZXO		Request you obtain retransmission of messages...from station...
ZXP		I have for you...(1. A request for direct air

		support; 2. A reply to a support request; precedence is...).
ZXQ		I have for you...(1. A request for tactical reconnaissance; 2. A request for photographic reconnaissance; 3. A request for artillery reconnaissance. Precedence is...).
ZXR		Intensive flag signaling will take place shortly (or in... minutes).
ZXS		Message which follows is to be handled by... 1) Officer Emergency Cryptographic team; 2) Ratings Emergency Cryptographic team; 3) Senior Communications Rating; 4) Junior Communications Rating; 5) Coder (Educational)).
ZXT		This message is not to be transmitted by radiotelegraph or radiotelephone in any form over part of its route.
ZXU		
ZXV		
ZXW		This message has been delivered to all action addressees whose designations follow this operating signal.
ZXX		This message has been delivered to all information addressees whose designations follow this operating signal.
ZXY		Transmit this message to the addressee(s) indicated by the numeral(s) following... All addressees are to be counted consecutively as they appear (numbers to be separated by the Separative Sign).
ZXZ		

**CHAPTER 3****SECTION A****ENCODE****SEARCH AND RESCUE**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
ALIGHT	Are you going to alight (or land) or Are you going to enter dock (or port)?	I am going to alight (or land) or I am going to enter dock (or port).	QTP
	Will you be forced to alight (or land)?	I am forced to alight (or land) immediately. or I will be forced to alight (or land) at... (position or place) at...hours.	QUG
AREA	Are you in the search area designated as...(designator or latitude and longitude)?	I am in the...(designation) search area.	QUW
CONDITION	What is the condition of survivors?	Survivors are in... condition and urgently need...	QTW
CONTINUING	Are you continuing the search?	I am continuing the search for...(aircraft, ship, survival craft, survivors or wreckage).	QTZ
DISTRESS	Have you received the distress signal sent by... (call sign of mobile station)?	I have received the distress signal sent by... (call sign of mobile station) at...hours.	QUF
	May I resume normal working?	Normal working may be resumed.	QUM
	May I resume restricted working?	Distress phase still in force; restricted working may be resumed.	QUZ
DOCTOR	Have you a doctor on board (or is ...(name of person) on board)?	I have a doctor on board (or... (name of person is on board).	QSQ
DRIFT	What is the estimated drift of the survival craft?	The estimated drift of the survival craft is... (figures and units).	QSE
ENDURANCE	How much fuel have you remaining (expressed as hours and/or minutes of consumption)?	Fuel remaining is...(hours and/ or minutes of consumption).	QBD

HOMING		Fly for...minutes on a magnetic heading of... degrees.	QGU
	Shall I home ship or aircraft to my position?	Home ship or aircraft... (call sign)... 1) to your position by transmitting your call sign and long dashes on...kHz (or MHz). 2) by transmitting on...kHz(or MHz) TRUE track to reach you.	QUU
IFF		IFF switched ON in distress position.	ZPN
LIGHTS	Are your navigation lights working?	My navigation lights are working.	QUI
	Shall I train my searchlight nearly vertical on a cloud, occulting if possible and, if your aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate your landing?	Please train your search light on a cloud, occulting if possible and, if my air craft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate my landing.	QUQ
MARKING	Will you indicate your position by... 1) searchlight? 2) black smoke trail? 3) pyrotechnic light?	My position is indicated by... 1) searchlight. 2) black smoke trail. 3) pyrotechnic lights trail	QUP
	Is position of incident marked?	Position of incident is marked (by...). 1) flame or smoke float. 2) sea marker. 3) sea marker dye 4) ...(specify other marking).	QUT
NEWS OF	Have you news of...(call sign)?	Here is news of...(call sign).	QUA
POSITION	Is position of survival craft marked?	Position of survival craft was marked at...hours by... 1) flame or smoke float. 2) sea marker. 3) sea marker dye. 4) ...(specify other marking).	QUY
POSITION INDICATING	Have you received the signals of emergency position indicating radio beacons...kHz (or MHz)?	I have received the signals an of an emergency position indicating radio beacons on...kHz (or MHz). (MARITIME USE ONLY)	QOK
POSITION INDICATING RADIOBEACON	Will you listen on...kHz (or MHz) signals for emergency position indicating radio beacons?	I am listening on...kHz (or MHz) for signals of emergency position-indicating radio beacons (MARITIME USE ONLY)	QOJ
PROCEED(IN	Are you proceeding to the	I am proceeding to the position of	QTY

G)	position of incident and if so when do you expect to arrive?	incident and expect to arrive at...hours(on...date).	
RELIEF	May I be relieved (at...hours)?	You may expect to be relieved at...hours (by.. 1) aircraft... (identification) (type...). 2) vessel whose call sign is...(call sign) (and/or whose name is...(name)).	QKF
	Will relief take place when... (identification) establishes... 1) visual. 2) communications, contact with survivors?	Relief will take place when (identification) establishes... 1) visual. 2) communications, contact with survivors.	QKG
RESCUE	Have you effected rescue?	I have effected rescue and am proceeding to...base (with... persons injured requiring ambulance).	QSF
	What has the rescue vessel or rescue aircraft recovered?	...(identification) has recovered... 1) ...(number) survivors. 2) wreckage. 3) ...(number) bodies.	QTD
	Have survivors... 1) received survival equipment?  2) been picked up by rescue vessel? 3) been reached by ground rescue party?	Survivors... 1) are in possession of survival equipment dropped by... 2) have been picked up by rescue vessel. 3) have been reached by ground rescue party.	QUR
SEA CONDITIONS		The sea conditions (at... position)... 1) permit alighting but not take-off. 2) render alighting extremely hazardous.	QKC
SEARCH	Report details of the parallel sweep (track) search being (or to be) conducted?  or In the parallel sweep (track) search being (or to be) conducted, what is (are)... 1) the direction of sweeps. 2) the separation between sweeps.	The parallel sweep (track) search is being (or to be) conducted... 1) with direction of sweeps... degrees...(true or magnetic). 2) with...(distance figures and units) separation between sweeps. 3) at a height of... (figures) above...(datum).	QKH



	3) the height above the datum, employed in the search pattern?		
	What other units are (or will be) taking part in the operation (... (identification of operation))?	In the operation (... (identification)), the following units are (or will be) taking part... (name and units). or ...(name) unit is taking part in operation (... (identification)) (with effect from...hours).	QKO
SEARCH (Cont'd)	Which pattern of search is being followed?	The search pattern is... 1) parallel sweep. 2) square search. 3) creeping line ahead. 4) track crawl. 5) contour search 6) combined search by aircraft and ship. 7) ...(specify).	QKP
	Shall I search for... 1) aircraft, 2) ship, 3) survival craft, in the vicinity of...latitude... longitude (or according to any other indication)?	Please search for... 1) aircraft, 2) ship, 3) survival craft, in the vicinity of...latitude... longitude (or according to any other indication).	QUO
SIGHTING	Have you sighted survivors or wreckage? If so, in what position?	Have sighted... 1) survivors in water. 2) survivors on rafts. 3) wreckage. in position...latitude (or according to any other...long indication).	QUS
URGENCY	Have you received the urgency signal sent by... (call sign of	I have received the urgency signal sent by...(call sign of mobile station) at...hours. mobile station)?	QUD

**SECTION B****ENCODE****RADIO NAVIGATION**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
BEARINGS	Do you intend to ask me for a series of bearings?	I intend to ask you for a series of bearings.	QDL
BEARINGS, MAGNETIC	Will you indicate the MAGNETIC heading for me to steer towards you (or...) with no wind?	The MAGNETIC heading for you to steer to reach me (or...) with no wind was ...degrees (at...hours).	QDM
	What is my MAGNETIC bearing from you (or from...)?	Your MAGNETIC bearing from me (or from...) was...degrees (at...hours).	QDR
BEARINGS, TRUE	What is my TRUE bearing from you? or What is my TRUE bearing from... (call sign)? or What is the TRUE bearing of... (call sign) from...(call sign)?	Your TRUE bearing from me is...degrees (at...hours). or The TRUE bearing of... (call sign) was... degrees (at... hours). or The TRUE bearing of... (call sign) from... (call sign) was... degrees at...hours.	QTE
HEADING, MAGNETIC	Will you indicate the MAGNETIC heading from me to steer towards you (or...) with no wind?	The MAGNETIC heading for you to steer to reach me (or...) with no wind was...degrees (at...hours).	QDM
HEADING, TRUE	Will you indicate the TRUE track to reach you (or...)?	The TRUE track to reach me (or...) is...degrees at... hours.	QUJ
HOLD		You are... (1. To maintain height of...feet and report over... (call sign) range station; 2. To hold on... leg of the beam... (call sign) range station at height ...feet).	ZSI
HOMING	Am I overhead?	You are overhead.	QFG
	Do you see me?	I see you at... (cardinal or quadrantal point of direction	QGV
	or Can you see the aerodrome? or Can you see... (aircraft).	I can see the aerodrome. or I see... (aircraft).	

	Are you able to home on your DF equipment?	I am able to home on my DF equipment (on station...).	QSH
HOMING (Cont'd)	Will vessels in my immediate vicinity (or in the vicinity of... latitude.... longitude) (or of...) please indicate their position, TRUE course and speed? Aeronautical Notes: a) All stations of the international aeronautical telecommunication service will interpret this signal (in part) as referring to TRUE TRACK. b. English-speaking stations of the maritime mobile service may interpret this signal (in part) as referring to TRUE HEADING. When communicating with such stations it is recommended that supplementary use be made of the signal QTI to avoid any misunderstanding.	My position, TRUE course and speed are...  Aeronautical Notes: a) All stations of the international aeronautical telecommunication service will interpret this signal (in part) as referring to TRUE TRACK. b) English-speaking stations of the maritime mobile service may interpret this signal (in part) as referring to TRUE HEADING. When communicating with such stations it is recommended that supplementary use be made of the signal QTI to avoid any misunderstanding.	QUN
	Shall I home ship or aircraft to my position?  * Aeronautical Note: Stations of the international aeronautical telecommunication service will interpret "course" to be "headings".	Home ship or aircraft... 1) ... (call sign) to your position by transmitting your call sign and long dashes on ...kHz (or Mhz). 2) ... (call sign) by transmitting on... kHz (or MHz) ....courses* to steer to reach you.	QUU
	Will you send your call sign and dashes of five-seconds duration at intervals in order that I (or...) may home on you?	I am about to send my call sign and dashes of five seconds duration at intervals in order that you (or...) may home on me.	ZMI
		Change over to loop direction finding on...kHz (or MHz) (and home on transmissions made by...).	ZMN
POSITION		Aircraft plotted (believed be you) in position...on track...degrees at...hours.	QKN
	Will you give me the position of my station according to the bearings taken by the direction finding stations which you	The position of your station according to the bearings taken by the direction-finding stations which I control	QTF

	control?	was...latitude...longitude, class...at...hours. Aeronautical Note: In the aeronautical direction finding service any other indication of position may be used.	
POSITION (Cont'd)	What is your position in latitude and longitude (or according to any other indication)?	My position is...latitude ...longitude (or according to any other indication).	QTH
PROCEDURE	Will you send two dashes of ten seconds each followed by your call sign (repeated .. times) (on...kHz(or MHz))?  or Will you request...to send two dashes of ten seconds followed by his call sign (repeated...times) on... kHz (or MHz)?	I am going to send two dashes of ten seconds each followed by my call sign (repeated times) (or... kHz (or MHz)).  or I have requested...to send two dashes of ten seconds followed by his call sign (repeated...times) on...kHz (or MHz).	QTG
	Am I to carry out the procedure appropriate to the use of the ...(facility)?	You are to carry out the procedure appropriate to the use of the ...(facility).	ZQD
STATION DISTANCE	What is my distance to your station (or to...)?	Your distance to my station (or to...) is... (distance figures and units). Note: This signal is normally used in conjunction with one of the signals QDM, QDR, QTE or QUJ.	QGE
	How far approximately are you from my station?	The approximate distance between our stations is ... nautical miles (or...kilometers).	QRB
STEER		Steer...degrees for 2 minutes if possible and send call sign and long dashes while you are so doing.	ZML
	What is the Grid Course for me to steer to reach you (or...)?	The Grid Course for you to steer to reach me (or...) is...degrees at ...hours.	ZMV

**SECTION C****ENCODE****DIRECTION FINDING**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
BEARINGS	Do you intend to ask me for a series of bearings?	I intend to ask you for a series of bearings.	QDL
	What was bearing of unknown station (or station using call sign ...) at... (time (on...kHz (or MHz)))?	Bearing of unknown station (or station using call sign...) was ... (at...time) class... (on...kHz (or MHz)).	ZMA
		Bearing of you (or of...) was ... (class...) from me (or from...) at... (time).	ZMB
		Bearing of station which answered message (or transmission) from... was... (at... (time)) class...(on...kHz (or MHz)).	ZMC
		1. Your bearing appears to be between...degrees and... degrees, and sense indicates you are to the ...(direction) of this station; 2. Your bearing is changing rapidly.	ZMD
		Pass in direction finding bearing(of...) obtained on...kHz (or MHz) (or between...and... kHz (or MHz).	ZME
	Will you endeavour to obtain a direction finding bearing of station now transmitting (or of...) (on...kHz (or MHz))?	Bearing of station now transmitting (or of...) (on...kHz (or MHz)) was...(class...) sense determined at...	ZMF
		This bearing (course or position) is unreliable. Error in excess of class C Bearing (or position) may amount...degrees or miles).	ZMG
		Check... (1. Correctness of last QDR; 2. Sense of last QDR; 3. Correctness of last QDM; 4. Sense of last QDM).	ZMJ
		Cannot determine your (or...'s... (1. Position; 2. Bearing).	ZMK

		Increase height to enable more accurate bearing to be completed.	ZMM
BEARINGS, MAGNETIC	What is my MAGNETIC bearing from you (or from...)?	Your MAGNETIC bearing from me (or from...) was... degrees (at...hours).	QDR
BEARINGS, TRUE	What is my TRUE bearing from you? or What is my TRUE bearing from... (call sign)? or What is the TRUE bearing of...(call sign) from... (call sign)?	Your TRUE bearing from me is... degrees (at...hours). or Your TRUE bearing from... (call sign) was...degrees (at... hours). or The TRUE bearing of... (call sign) from... (call sign) was... degrees at...hours.	QTE
DISTANCE	What is my distance to (or to...) your station (or to...)?	Your distance to my station is... (distance figures and units). Note: This signal is normally used in conjunction with one of the signals QDM, QDR, QTE or QUJ.	QGE
	How far approximately are you from my station?	The approximate distance between our stations is... nautical miles (or...kilometers).	QRB
GUARD		Take over direction finding guard as previously ordered (on...kHz (or MHz)) (from... to... kHz (or MHz)).	ZMR
HOMING		Change over to loop direction finding on...kHz (or MHz) (and home on transmissions made by...).	ZMN
LISTEN	Will you send two dashes of ten seconds each followed by your call sign (repeated...times) (on...kHz or MHz)? or Will you request...to send two dashes of ten seconds followed by his call sign (repeated... times) on...kHz (or MHz)?	I am going to send two dashes of ten seconds each followed by my call sign (repeated... times) (on...kHz (or MHz)). or I have requested...to send two dashes of ten seconds followed by his call sign (repeated... times) on...kHz (or MHz).	QTG
		...(1. Listen (for...) on direction finding on ...kHz, (or MHz) (or between...and... kHz (or MHz)); 2. Shift to direction finding frequency...and listen for call sign...).	ZMU

POSITION	Will you give me the position of my station according to the bearings taken by the D/F stations which you control?	The position of your station according to the bearings taken by the D/F stations which I control was... latitude...longitude (or other indication of position), class...at...hours.	QTF
	What is your position in latitude and longitude (or according to any other indication)?	My position is... latitude... longitude (or according to any other indication).	QTH
POSITION (Cont'd)	What is my position by direction finding bearing from nearest landmark (or from...)?	Your position by direction finding cross bearings from nearest landmark (or from ...) is...(class...) at.. (hours)	ZMO
		Endeavor to plot position from bearings taken on station(s) now transmitting (or of...) (on...kHz (or MHz)).	ZMP
		Cannot determine your position, you are in line or nearly in line with direction finding station baseline.	ZMQ
PROCEDURE		Surface craft using call sign... cooperating. Change to... kHz (or MHz) and follow direction finding procedure when called.	ZMH
		Carry out short direction finding procedure (as locally prescribed).	ZMS
SENSE		Sense determination unreliable, bearing may be reciprocal.	ZMT

**SECTION D****ENCODE****AERONAUTICAL AND SEA OPERATIONS**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
AERIAL		I am about to wind in my aerial.	QBE
		I am working on trailing aerial. or Work on trailing aerial	QCY
APPROACH	Will you inform me when you are on... leg of approach?	I am on... 1) cross-wind leg 2) down-wind leg 3) base leg 4) final leg of approach	QHE
	May I make a... approach (at... (place))? or Are you making an... approach?	You may make a... approach (at...(place)). or I am making an... approach.	QHQ
	May I make an approach using the facility indicated?	You may approach using the facility indicated.	ZSG
ARRIVAL		Arrange your flight in order to arrive over... (place) at...hours. or I am arranging my flight in order to arrive over... (place) at...hours.	QAG
	What is your estimated time of arrival at... is...hours. (or over...) (place)?	My estimated time of arrival at... (or over...) (place)	QRE
BEACON	1) Is the... visual beacon (at... (place)) in operation? 2) Will you switch on the... visual beacon (at...(place))? 3) Will you extinguish the aerodrome visual beacon (at... (place)) until I have landed?	1) The...visual beacon (at... (place)) is in operation. 2) I will switch on the... visual beacon (at...(place)). 3) I will extinguish the aerodrome visual beacon (at... (place)) until your landing is completed.	QFD
CARGO VESSEL	Are you a cargo vessel?	I am a cargo vessel.	QSC
CIRCUIT	Is a right hand circuit in force	A right-hand circuit is in force	QES



	at... (place)?	at... (place).	
CLEARANCE	May I have clearance (for...) from... (place and/or control) to... (place and/or control) at... (figures and units) height above (datum)?	You are cleared (or... is cleared) by...from...(place and/or control) to...(place and/or control) at... (figures and units) height above ... (datum).	QAB
	When may I expect approach clearance?	Expect approach clearance at... hours. or No delay expected.	QCE
CLEARANCE (Cont'd)		Delay indefinite. Expect approach clearance not later than ...hours.	QCF
	May I be cleared to land (at... (place))?	You are cleared to land (at... (place)).	QGN
	May I enter traffic circuit at... (figures and units) height above...(datum)?	Cleared to enter traffic circuit at...(figures and units) height above... (datum).	QHG
CLOUD	Are you flying in cloud?	I am flying in cloud at... (figures and units) height above... (datum) (and I am ascending (descending) to... (figures and units) height above that datum)	QBF
	Are you flying above cloud?	I am flying above cloud and at...(figures and units) height above...(datum). or Maintain a vertical distance of... (figures and units) above cloud, smoke, haze or fog levels.	QBG
	Are you flying below cloud?	I am flying below cloud and at... (figures and units) height above...(datum). or Maintain a vertical distance of... (figures and units) below cloud.	QBH
	Are you flying with no cloud in your vicinity?	I am flying with no cloud in my vicinity and at...(figures and units) height above... (datum).	QBK
	Are you flying between two layers of cloud?	I am flying between two layers of cloud and... (figures and units) height above...(datum)	QBN
	Are you flying in and out of cloud?	I am flying in and out of cloud and at...(figures and units) height above...(datum).	QBP
	Report your flying conditions in relation to clouds.	The reply to QBZ IMI is given by the appropriate answer form of	QBZ

		signals QBF, QBG, QBH, QBK, QBN and QBP.	
COLLISION	Is there any risk of collision?	There is risk of collision. Note: This signal should be followed by appropriate Q signals or ICAO approved abbreviations giving instructions for avoiding collision.	QAK
COMMUNICATION	Are you experiencing communication difficulties through flying in a storm?	I am experiencing communication difficulties through flying in a storm. Note: Attention is invited to the possible supplementary use of signals QAR, QBE, QCS, QRM, QRN, QRX, QSZ or the signal CL to amplify the meaning associated with signal QAZ.	QAZ
	Have you anything for me?	I have nothing for you.	QRU
	Can you communicate by radiotelegraphy (500 kHz)?	I can communicate by radiotelegraphy (500 kHz). (MARITIME USE ONLY)	QOA
	Can you communicate by radiotelephony (2182 kHz)?	I can communicate by radiotelephony (2182 kHz) (MARITIME USE ONLY)	QOB
	Can you communicate by radiotelephony (channel 16 - Frequency 156.80 MHz)	I can communicate by radiotelephony (channel 16 - Frequency 156.80 Mhz). (MARITIME USE ONLY)	QOC
	Can you communicate with me in... 0) Dutch      5) Italian 1) English    6) Japanese 2) French     7) Norwegian 3) German    8) Russian 4) Greek      9) Spanish	I can communicate with you in... 0) Dutch      5) Italian 1) English    6) Japanese 2) French     7) Norwegian 3) German    8) Russian 4) Greek      9) Spanish (MARITIME USE ONLY)	QOD
CONTROL	Will you accept control (or responsibility) of (for) ...now (or at...hours)?	I will accept control (or responsibility) of (for) ...now (or at...hours).	QDP
DEPARTURE	At what time did you depart at... hours from...(place)?	I departed from...(place)	QTN
	Are you airborne? or Have you left dock (or port)?	I am airborne or I have left dock (or port).	QTO
	Are you (or is...) ... 1) Airborne; 2) Waterborne;	I am (or...is) ...at...(time) 1) Airborne; 2) Waterborne;	ZQC

	3) On land.?	3) On land.	
DESTINATION	May I have clearance (for...) from... (place and/or control) to... (place and/or control) at... (figures and units) height above... (datum)?	You are cleared (or...is cleared) by...from... (place and/or control) to...(place and/or control) at...(figures and units) height above...(datum).	QAB
	Are you going to land at... (place)? or Has aircraft...landed at... (place)? (See also signal QTP).	I am going to land at.. (place). or (You may) land at...(place). or Aircraft...landed at...(place). (see also signal QTP).	QAL
DESTINATION (Cont'd)	Where are you bound and where are you from?	I am bound for...from..	QRD
DOCKING	Are you going to alight (or land)? or Are you going to enter dock (or port)?	I am going to alight (or land). or I am going to enter dock (or port).	QTP
DOCTOR	Have you a doctor on board (or is ...(name of person) on board)?	I have a doctor on board (or... (name of person) is on board).	QSQ
FACILITY	Will you give me the latest information concerning... facility (at... (place))?	The latest information concerning ...facility (at... (place)) is as follows... Note: The information is given by sending appropriate NOTAM Code groups.	QFP
		I am not equipped to give the information (or provide the facility requested).	QNO
FLIGHT CONDITIONS	Are you flying in cloud?	I am flying in cloud at... (figures and units) height above... (datum) (and I am ascending (descending) to... (figures and units) height above the datum).	QBF
	Report your flying conditions in relation to clouds.	The reply to QBZ IMI is given by the appropriate answer form of signals QBF, QBG, QBH, QBK, QBN and QBP.	QBZ
	Are you flying in visual meteorological conditions?	I am flying in visual meteorological conditions. or Fly at all times in visual meteorological conditions.	QDT
	Are you flying in a horizontal	I am flying in a horizontal	QDV

	visibility of less than... (figures and units)?	visibility of less than... (figures and units) at... (figures and units) height above...(datum).	
FLIGHT RULES	Is flight under IFR compulsory at...(place) (or from... to...(place))?	Flight under IFR is compulsory at...(place) (or from...to...(place)).	QBI
	What is the nearest aerodrome at which flight under VFR is permissible and which would be suitable for my landing?	Flying under VFR is permissible at...(place) which would be suitable for your landing.	QBO
		Cancel my IFR flight plan.	QDU
FUEL		I am about to jettison fuel.	QAU
	How much fuel have you remaining (expressed as hours and/or minutes of consumption)?	Fuel remaining is...(hours and/ or minutes of consumption).	QBD
GLIDER	Do you have glider in tow?	1) We have glider in tow; 2 ) We are forced to release glider at (approximate position).	ZSE
HEADING		Fly for...minutes on a heading that will enable you to maintain a track reciprocal to your present one.	QGT
		Fly for...minutes on a magnetic heading of...degrees.	QGU
	What is your heading?	My TRUE heading is...degrees	QTL
	What is your MAGNETIC heading?	My MAGNETIC heading is...degrees.	QTM
HEIGHT ALTITUDE	What is your height above... (datum)?	I am at...(figures and units) height above...(datum). Note: An aircraft is permitted to reply to QAH IMI by using any of the answer forms of signals QBF, QBG, QBH, QBK, QBN or QBP. In such cases the signal QAH is omitted from the reply. or Arrange your flight so as to reach...(figures and units) height above...(datum) at... (hours or place).	QAH
		Ascend (or descend) to.. (figures and units) height above... (datum) before encountering instrument meteorological conditions or if	QBS

		visibility falls below... (figures and units of distance) and advise.	
	Have you reached the...(figures and units) height above... (datum) (or...(area or place))?	I have reached the...(figures and units) height above... (datum) (or...(area or place)). or Report reaching the...(figures and units) height above... (datum) (or... (area or place)).	QBV
	Have you left the... (figures and units) height above...(datum) (or...(area or place))?	I have left the... (figures and units) height above... (datum) (or... (area or place)). or Report leaving the... (figures and units) height above... (datum) (or... (area or place)).	QBX
HEIGHT ALTITUDE (Cont'd)	May I change from...(figures and units) to...(figures and units) height above ... (datum)?	You may change from...(figures and units) to...(figures and units) height above...(datum). or I am changing from...(figures and units) to...(figures and units) height above...(datum).	QCA
	May I descend below the clouds?	You may descend below the clouds.	QFH
	What height above...(datum)... 1) should I maintain? 2) are you maintaining 3) do you intend cruising at?	1) Maintain (or fly at)... (figures and units) height above...(datum). 2) I am maintaining...(figures and units) height above...(datum). 3) I intend cruising at... (figures and units) height above... (datum).	QFM
	What is your desired rate of descent expressed in hundreds of feet per minute?	My desired rate of descend is... hundreds of feet per minute.	ZQE
	May I ascend to... (height)?	You may ascend to...(height).	ZSA
	May I descend to... (height)?	You may descend to...(height).	ZSB
		You are...(1. To maintain height of...feet and report over...(call sign) range station; 2. To hold on...leg of the beam...(call sign) range station at height...feet).	ZSI
HOLD	Shall I hold my position?	Hold your position	QEN
	May I hold at... (place)?	Hold at...(place) at... (figures and units) height above... (datum) and	QGG

		await orders.	
		Hold on...direction of... facility.	QGZ
		You are...(1. To maintain height of...feet and report over...(call sign) range station; 2. To hold on...leg of the beam...(call sign) range station at height...feet.).	ZSI
IFF		Switch ON IFF.	ZSC
		IFF switched OFF.	ZSD
		Switch off...(1. IFF; 2. IFF sets for 10 minutes in area denoted except for ships whose call signs follow).	ZSF
LANDING	May I land immediately?	You may land immediately.	QFO
	May I land using... (procedure or facility)?	You may land using... (procedure or facility).	QGH
		Landing is prohibited at... (place).	QGO
	What is my number for landing?	You are number...to land.	QGP
LANDING (Cont'd)	Are you making an emergency landing?	I am making an emergency landing.  or Emergency landing being made at...(place). All aircraft below ...(figures and units) height above...(datum) and within a distance of... (figures and units) leave...(place or headings).	QHH
	Are you going to alight (or land)?  or Are you going to enter dock (or port)?	I am going to alight (or land).  or I am going to enter dock(or port).	QTP
	Will you be forced to alight (or land)?	I am forced to alight (or land) immediately.  or I will be forced to alight (or land) at...(position or place) at...hours.	QUG
	What is the magnetic direction in which landing is to be made?	The magnetic direction in which landing is to be made is ... degrees.	ZQB
LANDING GEAR	Does my landing gear appear damaged?	Your landing gear appears damaged.	QFR
	Does my landing gear appear to be down and in place?	Your landing gear appears to be down and in place.	QGW
LANDING	What is the condition of the	The condition of the landing	QEM

SURFACE	landing surface at...(place)?	surface at...(place) is... Note: The information is given by sending appropriate NOTAM Code groups.	
LIGHTING		The... 1) approach 2) runway 3) approach and runway lights ... are out of order.	QFB
	Are the aerodrome lights lit?	The aerodrome lights are lit. or Please light the aerodrome lights.	QFI
	Are the approach and runway lights lit?	The approach and runway lights are lit. or Please light the approach and runway lights.	QFQ
	Are the floodlights switched on?	The floodlights are switched on. or Please switch on the floodlights.	QFV
		I am not equipped to give the information (or provide the facility) requested.	QNO
LIGHTING (Cont'd)	Are your navigation lights working?	My navigation lights are working.	QUI
	Shall I train my searchlight nearly vertical on a cloud, occulting if possible and, if your aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate your landing?	Please train your searchlight on a cloud, occulting if possible and, if my aircraft is seen or heard, deflect the beam up wind and on the water (or land) to facilitate my landing.	QUQ
		The landing lights at the aerodrome (or at the aerodrome at ...) are out of order.	ZQA
OBSTRUCTION		There are obstructions to the... of runway...	QGC
	Are there on my track any obstructions whose elevation equals or exceeds my altitude?	There are obstructions on your track...(figures and units) height above...(datum).	QGD
OVERSHOOT PROCEDURES		I am about to carry out overshoot procedure.	QAW
PARKING	Have I reached my parking area?	You have reached your parking area.	QEF
	or Have you reached your	or I have reached my parking area.	

	parking area?		
	May I leave the parking area? or Have you left the parking area?	You may leave the parking area or I have left the parking area.	QEG
POSITION	Will you advise me when you are (were) at (over) ...(place)?	I am (was) at (over)...(place) (at... hours) (at...(figures and units) height above... (datum).	QAF
	Will you advise me when you pass (passed)...(place) bearing 090 (270) degrees relative to your heading?	I passed...(place) bearing... degrees relative to my heading at...hours.	QAY
	Shall I hold my position?	Hold your position.	QEN
	Are you (or is...) 1) waterborne? 2) on land?	I am (or...is)... 1) waterborne) at...hours. 2) on land.	QHI
		Aircraft plotted (believed to be you) in position...on track... degrees at...hours.	QKN
		I am approaching my point of no return.	QNR
	How far approximately are you from my station?	The approximate distance between our stations is... nautical miles (or...kilometers).	QRB
	What is your position in latitude/longitude (or according to any other indication)?	My position is...latitude... longitude (or according to any other indication).	QTH
POSITION (Cont'd)	What was your time over last compulsory reporting point, and ETA at next compulsory reporting point?	My time over last compulsory reporting point was ...and my ETA at next compulsory reporting point is...	ZVB
PRESSURE	What should I set on the sub-scale of my altimeter so that the instrument would indicate my elevation if I were on the ground at your station?	If you set the sub-scale of your altimeter to read .... millibars (or hundredths of an inch*), the instrument would indicate your elevation if you were on the ground at my station at...hours. *Note: When the setting is given in hundredths of an inch the abbreviation "INS"	QNH
RETURN		I am approaching my point of no return.	QNR
	Are you returning to...(place)?	I am returning to...(place) or Return to...(place).	QRF



RUNWAY	What is the magnetic direction(or number) of the runway to be used?	The magnetic direction (or number) of the runway to be used is... Note: The runway number is indicated by a two-figure group and the magnetic direction by a three-figure group.	QFU
	What is the length of the runway in use in ...(units)?	The length of runway...now in use is...(figures and units).	QFW
		There are obstructions to the...of runway...	QGC
	What is the length in yards of the runway in use?	The length of the runway in use is...yards.	ZQF
SAFETY	What is the essential traffic? Note: Relates to aircraft and not communication traffic.	The essential traffic is... Note: Relates to aircraft and not communication traffic.	QAI
	Am I near a prohibited area (or...prohibited area)?	You are... 1) near 2) flying over a prohibited area (or... prohibited area).	QAQ
		Make a 360-degree turn immediately (turning to the...). or I am making a 360-degree turn immediately (turning to the...).	QCI
	Shall I circle the aerodrome (or go around)?	Circle the aerodrome (or go around).	QHZ
	Have you received the safety signal sent by ... (name and/or call sign)?	I have received the safety signal sent by...(name and/or call sign) (MARITIME USE ONLY)	QOE
SEE ME	Do you see me?	I see you at... (cardinal or quadrantal point of direction).	QGV
	or Can you see the aerodrome? or Can you see... (aircraft)?	I can see the aerodrome. or I see...(aircraft).	
SPEED	What is your speed? (Requests the speed of a ship or aircraft through the water or air respectively.)	My speed is...knots (or... kilometers or... statute miles per hour). (Indicates the speed of a ship or aircraft through the water or air respectively).	QTJ
	What is the speed of your aircraft in relation to the surface of the earth?	The speed of my aircraft in relation to the surface of the earth is...knots (or...kilometers or...statute miles per hour).	QTK

STEER	What is the Grid Course for me to steer to reach you (or...)?	The Grid Course for you to steer to reach me (or...) is...degrees at...hours.	ZMV
TAKE-OFF	May I assume position for take off? or Have you assumed position for take-off?	Cleared to hold at take-off position for runway number... or I am assuming take-off position for runway number...and am holding.	QEJ
	Are you ready for immediate take-off?	I am ready for immediate take-off.	QEK
	May I take-off (and make a... hand turn after take-off)?	You are cleared to take-off (turn as follows after take off...).	QEL
TAXIING	May I taxi to... (place)?	Cleared to taxi to... (place). (The place is given in plain language)	QCH
	May I cross the runway ahead of me?	You may cross the runway ahead of you.	QEA
	May I turn at the intersection?	Taxi as follows at the intersection... (straight ahead      DRT turn left              LEFT turn right             RITE).	QEB
	May I make a 180 degree turn and return down the runway?	You may make a 180-degree turn and return down the runway.	QEC
	Shall I follow the pilot vehicle?	Follow the pilot vehicle.	QED
	May I move to the holding position for runway number...? or Have you moved to the holding position for runway number...?	Cleared to the holding position for runway number... or I have moved to the holding position for runway number...	QEH
	Shall I clear the runway (or landing area)? or Have you cleared the runway (or landing area)?	Clear the runway (or landing area). or I have cleared the runway (or landing area).	QEO
TRACK	What track should I make good? or What track are you making good?	Make good a track from... (place) on...degrees...(true or magnetic). or I am making good a track from... (place) on...degrees... (true or magnetic).	Q GK
		Fly for...minutes on a heading	QGT

		that will enable you to maintain a track reciprocal to your present one.	
	What is your TRUE track?	My TRUE track is...degrees.	QTI
TRAFFIC	What is the essential traffic? Note: Relates to aircraft and not communication traffic.	The essential traffic is... Note: Relates to aircraft and not communication traffic.	QAI
ZONE	May I enter the... (control area or zone) at...(place)?	You may enter the... (control area or zone) at...(place).	QGL
		Leave the...(control area or zone)	QGM

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**SECTION E****ENCODE****METEOROLOGY**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
CLOUD	What is the amount, type and height above official aerodrome elevation of the base of the cloud (at...(place))?	The amount, type and height above official aerodrome elevation of the base of the cloud at...(place) at...hours is: ...eighths (...type) at...(figures and units)* height above official aerodrome elevation.	QBB
<p>*Note: The cloud amount, type (if reported and vertical distance information is reported in sequence if several cloud layers are present, the order of reporting being from low to high levels in accordance with the following cloud layer specifications:</p> <p>a) the lowest individual layer of any amount;</p> <p>b) the next higher individual layer the amount of which is three-eighths or more (to the nearest eighth);</p> <p>c) the next higher individual layer the amount of which is five-eighths or more (to the nearest eighth).</p> <p>Example: - QBB CYUL 1300 2 300 FT 3 1500 FT 6 9000 FT =</p>			
CLOUD (Cont'd)	What is the amount, type and height above...(datum) of the top of the cloud (at... (position or zone))?	At...hours at...(position or zone) the top of the cloud is: amount... eighths (...type) at... (figures and units) height above...(datum).	QBJ
	What is the amount, the type and the height above...(datum) of the base of the cloud at... (place, position or zone)?	At...(place, position or zone) the base of the cloud is... eighths... type at...(figures and units) height above...(datum). Note: If several cloud layers or masses are present, the lowest is reported first.	QFC
	Report the vertical distribution of cloud (at... (position or zone)) as observed from your aircraft.	The vertical distribution of cloud as observed from my aircraft at... hours at ... (position or zone) is: lowest layer observed *... eighths (...type) with base of...(figures and units) and tops of...(figures and units) (*and similarly in sequence for each of the layers observed.) height above...	QMI

		(datum). Example: = QMI 1400 11 2 CU 1000 FT 2500 FT 6 SC 6000 FT 10000 FT 5 AC 13000 FT 14000 FT ALT=	
CONDITIONS	Report meteorological conditions as observed from your aircraft (at... (position or zone)) (at... hours).	The meteorological conditions as observed from my aircraft at...(position or zone) at... hours at...(figures and units) height above...(datum) are... Note: The information may be given in AIREP, or Q Code form. When given in Q Code, the following sequence of Q signal answer (or advice) forms is used: QMX, QNY, QAO, QDF, QMI, QFT and QNI.	QBC
	Please report the present meteorological landing conditions (at... (place)).	The present meteorological landing conditions at...(place) are.. Note: When given in Q Code the information is sent in the following sequence: QAN, QBA, QNY, QBB, QNH and/or QFE and, if necessary, QMU, QNT, QBJ. It is not normally necessary to precede the QAN, QBA, QNY and QBB information by these Q signals but this may be done if considered desirable.	QFY
DELIVERY		If more than one tropical wind warning message in this sequence is awaiting transmission, transmit highest serial number first. (Sequence/serial is under-stood to include tropical warning name or number and consecutive warning number).	ZPU
		If the earlier wind warnings identified by DTG(s) following this signal are awaiting transmission, file those warnings without further transmission.	ZPV
		This message canceled at time indicated. File without further transmission.	ZPW
FORECAST	What is the meteorological	The meteorological forecast for...	QFA

	forecast for... (flight, route, section of route or zone) for the period... hours until... hours?	(flight, route, section of route or zone) for the period...hours until...hours is... Note: When the forecast is given in Q Code the following sequence of Q signal answer (or advice) forms is to be given: QAO, QMX, QMI, QNY, QBA, QMW, QFT and QNI.	
FORECAST (Cont'd)	What is the aerodrome meteorological forecast for... (place) for the period...hours until...hours?	The aerodrome meteorological forecast for...(place) for the period...hours until...hours is... Note: When given in Q Code the following sequence of Q signal answer (or advice) forms is to be used: QAN, QBA, QNY, QBB and, if necessary, QMU, QNT and QBJ.	QFZ
	Have you any amendments to the flight forecast in respect of section of route yet to be traversed?	The following amendment(s) should be made to the flight forecast...(If no amendments, signal QMZ NIL).	QMZ
	Can you give me in the following order information concerning: the direction in degrees TRUE and speed of the surface wind; visibility; present weather; and amount, type and height of base of cloud above surface elevation...(place of observation)?	Here is the information requested:... (the units used for speed and distances should be indicated).	QUB
ICE	Between what heights above... (datum) has ice formation been observed (at... (position or zone))?	Ice formation has been observed at...(position or zone) in the type of...and with an accretion rate of... between...(figures and units) and... (figures and units) heights above... (datum).	QFT
OBSERVATION	What is the latest available meteorological observation for... (place)?	Meteorological observation made at...(place) at...hours was as follows... Note: The information may be given in Q Code form or the AERO form of the international meteorological figure code. When in Q Code, the information	QAM

		is to be given in the following sequence of Q signal answer (or advice) forms: QAN, QBA, QNY, QBB, QNH and/or QFE and, if necessary, QMU, QNT and QBJ. It is not normally necessary to precede the QAN, QBA, QNY and QBB information by these Q signals but this may be done if considered desirable. When in the AERO form of international meteorological figure code, the abbreviation AERO is to precede the information.	
PRESENT WEATHER	What is the present weather and the intensity thereof at... ...(place, position or zone)?	The present weather and intensity thereof at...(place, position or zone) at...hours is... (See Notes a) and b)). Notes: a) When present weather information is transmitted by a ground station, the information shall be selected from the present weather table (Table III) in PANSMET (Doc 7605/MET/526). If none of these conditions prevail the reply shall be NIL. b) When present weather information is transmitted by an aircraft, the information shall be selected from Item 11, AIREP. If none of these conditions prevail the reply shall be QNY NIL or alternatively the appropriate answer (or advice) form of signals QBF, QBG, QBH, QBK, QBN or QBP. The alternative may also be given in addition to present weather conditions when one of more of the conditions listed in Item 11 prevail.	QNY
PRESSURE	What is your D-Value at... (position)?	My D-Value at...(position) at... (figures and units) height above the 1013.2 millibars datum is...	QDF

	<p>or</p> <p>What is the D-Value at... (place or position) (at... hours) for the ... millibar level?</p>	<p>(D-Value figures and units)...* (specify plus or minus).</p> <p>or</p> <p>The D-Value at...(place or position at...hours for the... millibar level is...(D-Value figures and units)...*(specify plus or minus).</p> <p>*Note: When the true altitude (radio altitude) is greater than the pressure altitude PS (Plus) is used and when it is less MS (Minus) is used.</p>	
	(At...(place)) what is the present atmospheric pressure at official aerodrome elevation?	At...(place) the atmospheric pressure at official aerodrome elevation is (or was observed at...hours to be)...millibars.	QFE
PRESSURE (Cont'd)	(At...(place)) what is the present atmospheric pressure converted to mean sea level in accordance with meteorological practice?	At...(place) the atmospheric pressure converted to mean sea level in accordance with meteorological practice is (or was determined at...hours to be)...millibars.	QFF
	What indication will my altimeter give on landing at...(place) at...hours, my subscale being set to 1013.2 millibars (29.92 inches)?	On landing at...(place) at...hours, with your subscale being set to 1013.2, millibars(29.92 inches), your altimeter will indicate... (figures and units).	QNE
	What should I set on the sub-scale of my altimeter so that the instrument would indicate my elevation if I were on the ground at your station?	If you set the sub-scale of your altimeter to read... millibars (or hundredths of an inch*), the instrument would indicate your elevation if you were on the ground at my station at...hours. *Note: When the setting is given in hundredths of an inch the abbreviation "INS" is used to identify the units.	QNH
	Will you give me the present barometric pressure at sea level? Aeronautical Note: Stations of the international aeronautical telecommunication service will interpret this signal as:	The present barometric pressure at sea level is...(units). Aeronautical Note: Stations of the international aeronautical telecommunication service will interpret this signal as: The present atmospheric pressure at the present water level at... (place	QUH



	What is the present atmospheric pressure at the present water level?	or position) at...hours is...(figures and units).	
RESPONSIBILITY	Will you accept control (or responsibility) of (for)...now (or at...hours)?	I will accept control (or responsibility) of (for)... now (or at...hours).	QDP
SEA	Can you tell me the condition of the sea observed at... (place or coordinates)?	The sea at...(place or coordinates) is...	QUK

Aeronautical Note: Stations of the international aeronautical telecommunication service will complete the answer, information or advice form by the use of a numbered alternative as given hereunder, selected according to the average wave height as obtained from the larger well formed waves of the wave system being observed. If observed height coincides with one of the limits, report the lower numbered alternative, e.g., waves with a mean maximum height of 4 meters are to be reported as "5".

See Table on next page:

Number		Height	
		Meters	Feet (approx.)
0	Calm-glassy	0	0
1	Calm-rippled	0-0.1	0-1/3
2	Smooth wavelets	0.1-0.5	1/3-1 2/3
3	Slight	0.5-1.25	1 2/3-4
4	Moderate	1.25-2.5	4-8
5	Rough	2.5-4	8-13
6	Very rough	4-6	13-20
7	High	6-9	20-30
8	Very high	9-14	30-45
9	Phenomenal	Over 14	Over 45

SWELL	Can you tell me the swell observed at...(place or coordinates)?	The swell at...(place or coordinates) is...	QUL
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Aeronautical Note: Stations of the international aeronautical telecommunication service will complete the answer, information or advice form by the use of the following numbered alternatives:

Number	Length of Swell	Height
0	-	-
1	Short or average	Low
2	Long	Low
3	Short	Moderate
4	Average	Moderate

5	Long	Moderate
6	Short	Heavy
7	Average	Heavy
8	Long	Heavy
9	Confused	-

Additionally, stations of the international aeronautical telecommunication service may indicate the direction of swell by the use of the appropriate cardinal or quadrantal point abbreviation N, NE, E, SE, etc. following the numbered alternate for indicating swell condition. The descriptions in the above numbered alternative are as follows:

Length of Swell		
	Meters	Feet (approx.)
Short =	0-100	0-300
Average =	100-200	300-600
Long =	Over 200	Over 600

Height of Swell		
	Meters	Feet (approx.)
Low =	0-2	0-7
Moderate =	2-4	7-13
Heavy =	Over 4	Over 13

When there is no swell, the numbered alternative "0" is used; when the swell is such that the length and height of the swell waves cannot be determined, the numbered alternative "9" is used.

TEMPERATURE	At...(position or zone) what is (are) the height(s) above... (datum) of the zero Celsius isotherm(s)?	At...(position or zone) the zero Celsius isotherm(s) is (are) at... (figures and units) height(s) above...(datum).	QMW
	What is the air temperature (at... (position or zone)) (at... hours) at the... (figures and units) height above...(datum)?	At...(position or zone) at...hours the air temperature is...(degrees and units) at... (figures and units) height above...(datum). Note: Aircraft reporting QMX information will transmit the temperature figures as corrected for airspeed.	QMX
	What is the surface temperature at...(place) and what is the dew point temperature at that place?	The surface temperature at... (place) at...hours is... degrees and the dew point temperature at that time and place is...degrees.	QMU
TURBULENCE	Between what heights above... (datum) has turbulence been observed at...(position or zone)?	Turbulence has been observed at...(position or zone) with an intensity of...between...(figures and units) and... (figures and units) heights above...(datum).	QNI

VISIBILITY	What is the horizontal visibility at...(place)?	The horizontal visibility at...(place) at...hours is...(distance figures and units).	QBA
	How far, along the runway, from the approach end, can the observer at the runway threshold see the runway lights which will be in operation for my landing (at... (place))?	At...hours, the observer at the threshold of runway number... could see the runway lights in operation for your landing(at...(place)) for a distance of...(figures and units) from the approach end. Note: If the station inquired of is not equipped to make the special observation requested, the reply to QBT IMI is given by the signal QNO.	QBT
WARNINGS	Do you have any navigational warnings or gale warnings in force?	I have the following navigational warning(s) or gale warning(s) in force...	QUX
WEATHER CONTROLLED MESSAGE		This is a weather controlled message which is not to be transmitted in the clear over radio circuits.	ZIK
		Pass this message to the nearest (or...) weather central/control.	ZOI
WIND	What is the surface wind direction and speed at...(place)?	The surface wind direction and speed at...(place) at...hours is...(direction) ...speed figures and units). Note: Unless otherwise indicated in the question, answer (or advice), surface wind direction is given in degrees relative to MAGNETIC North.	QAN
	What is the wind direction in degrees TRUE and speed at...(position or zone/s at each of the... (figures)... (units) levels above...(datum)?	The wind direction and speed at...(position or zone/s) at the following heights above...(datum) is: ...(vertical distance in figures and units) ...degrees TRUE... (speed in figures and units) (units) ...(vertical distance in figures and units) ...degrees TRUE...(speed in figures and units).	QAO
	What is the maximum gust speed of the surface wind at...(place)?	The maximum gust speed of the surface wind at...(place) at...hours is...(speed figures and units).	QNT

**SECTION F****ENCODE****COMMUNICATIONS EQUIPMENT AND CIRCUITS**  
**ADJUSTING AND TESTING**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
ACCEPTA - BILITY	What are the estimated errors per thousand characters in my signals (or those of...)?	The estimated errors per thousand printed characters in your signals (or those of ...) is... 1) Greater than 13 2) 7 to 12 3) 1 to 6 4) Nil	ZBJ
	What is the printing acceptability of my signals (or those of...)?	The printing acceptability of your signals (or those of...) is... 1) Unacceptable - totally corrupt; 2) Unacceptable - very corrupt; 3) Unacceptable - partly corrupt; 4) Acceptable- occasionally corrupt; 5) Acceptable - no corruption).	ZBZ
AERIAL		I am about to wind in my aerial.	QBE
		I am working on trailing aerial. or Work on trailing aerial.	QCY
		I am working (or am going to work) on a fixed aerial. or Work on a fixed aerial.	QFX
		Fixed Aerial... 1) Omni-directional 2) Rotatable 3) Directional	ZTT
AUTOMATIC	How do you receive my automatic transmissions?	Your automatic transmissions are ... (1. Good; 2. Fair; 3. Unreadable)	ZHN
	What is your speed of automatic transmission in... 1) Revolutions per minute 2) Words per minute 3) Bauds	My speed of automatic transmission in... 1) Revolutions per minute; 2) Words per minute; 3) Bauds; is....	ZHO
	What is preventing automatic reception?	Automatic reception is prevented by...	ZHP

	Is my speed of automatic transmission correct?	Your speed of automatic transmission is... (1. Fast; 2. Slow; 3. Erratic; 4. Correct).	ZHR
AUTOMATIC (Cont'd)	Are you ready for automatic operation?	I am ready for automatic operation. Send at...words/min.	QRR
BIAS	What is my bias distortion?	Your bias distortion is... (1. Excessive; 2. ... percent (marking); 3. ...percent (spacing); 4. ...percent (total distortion).	ZTN
CALL	Shall I repeat the call on the calling frequency?	Repeat your call on the calling frequency; did not hear you (or have interference).	QSR
CARRIER		Your carrier is... (1. Over-suppressed; 2. Under-suppressed)	ZRS
CASE	Am I transmitting... 1) in letters? 2) in figures?	You are transmitting... 1) in letters. 2) in figures.	QJD
		You are transmitting in upper case.	ZBG
CHANNEL	Shall I revert to single channel working?	Revert to single channel working.	ZRK
	Can you read me on... (1. Channel A; 2. Channel B; 3. Channel(s); 4. All channels)?	I can read you on...(1. Channel A; 2. Channel B; 3. Channel(s); 4. All channels; 5. No channels).	ZRO
		Transfer signal on channel... to channel... (Should only be used when order originates from a third working channel. See ZRV for use between directly connected working channels).	ZRP
		Transfer signal to channel...	ZRV
CHARACTER	Is my character formation correct?	Your character formation is... (1. Correct; 2. Defective in the start element; 3. Defective in the 1st unit; 4. Defective in the 2nd unit; 5. Defective in the 3rd unit; 6. Defective in the 4th unit; 7. Defective in the 5th unit; 8. Defective in the stop element).	ZTO
CHECK	Will you check your... 1) transmitter distributor? 2) auto-head? 3) perforator? 4) reperforator? 5) printer? 6) printer motor? 7) keyboard? 8) antenna system?	I will check my... 1) transmitter distributor. 2) auto-head. 3) perforator. 4) reperforator. 5) printer. 6) printer motor. 7) keyboard. 8) antenna system.	QJC
	Will you check your...?	I will check my...	ZRJ

CODE	Are you working on the correct code? Note: This meaning applies only to frequency shift diplex.	I am working on the correct code.  Note: This meaning applies only to frequency shift diplex.	ZRL
CONNECT	Are you (or is...) connected to...?	I am (or...is) connected to...	ZTK
DISCONNECT	Are you (or is...) about to disconnect?	I am (or...is) about to disconnect.	ZTL
EQUIPMENT		Broadcast transmitter indicated is about to be taken off for... minutes (or until...).	ZJT
		...(1. Radio; 2) Visual; 3) Landline; 4) Teletypewriter (teleprinter); 5) Telephone; 6) Automatic; 7) Facsimile; 8) Shore telephone; 9) Shore teleprinter; 10) Radio teletypewriter; 11) Satellite	ZTA
		1) Transmitter-distributor; 2) Autohead; 3) Perforator; 4) Reperforator; 5) Printer; 6) Undulator; 7) Keyboard; 8) Frequency shift keyer; 9) Multiplexing carrier base; 10) On line crypto device.	ZTB
		...(class of emission/type of transmission as indicated in Chapter 6).	ZTG
		...(1. Receiver; 2. Transmitter 3. Power supply; 4. Antenna system; 5. Radio direction finder).	ZTI
FACILITIES	Is the...radio facility at... (place) in operation?	The...radio facility at... (place) is in operation (or will be in operation in... hours).  or Please have the...radio facility at... (place) put in operation.	QFS
	Is the...radio facility still required?	The...radio facility is still required.	OLV
		Facility indicated cannot be operated at present.	ZLN

FACILITIES (Cont'd)	Is (are) facility (ies)...operative at your station (or at....)?	The following...facility(ies) is (are) operative at this station (or at...).	ZLO
		1) Homing beacon; 2) Radar beacon; 3) Revolving and/or Flashing beacon; 4) Radio beacon; 5) Instrument landing system; 6) Ground control approach; 7) Approach control; 8) Tower transmitter 9) (state which type LF, MF, VHF, or UHF); 10) MF Direction finder; 11) VHF Direction finder; 12) UHF Direction finder; 13) Runway lights; 14) Sandra lights; 15) Radio track guide; 16) Radio range.	
FACSIMILE		I have pictures of the following types to transmit... (1. Photographs; 2. Weather maps; 3. Blueprints; 4. Printed matter; 5. Test).	ZLA
	What drum rotation speed shall I use?	Transmit at...revolutions per minute. (1. 30; 2. 45; 3. 50; 4. 60; 5. 90; 6. 100.)	ZLB
		Your transmission... 1) Shows objectionable modulation 2) Suitable for communication but not for picture; 3) Shows caption too close to edge of picture; 4) Shows buckled print; 5) Shows fork drift; 6) Picture shows too much contrast; 7) Picture shows insufficient contrast; 8) Picture shows cross-over).	ZLC
		I am unable to... 1) Synchronize with you; 2) Transmit pictures; 3) Copy pictures).	ZLD
FACSIMILE (Cont'd)		Send...(1. Fence; 2. White; 3. Black; 4. Picture; 5. Synchronize;	ZLE

		6. Fence swinging black until I stop you; 7. Fence swinging white until I stop you).	
		...(1. Inverter; 2. Converter; 3. 96-line 12 x 18 transceiver; 4. 100-line transceiver; 5. 300-line transceiver).	ZLF
	Shall I transmit... (1. Negative; 2. Positive)?	Transmit... (1. Negative; 2. Positive).	ZLG
	Will you transmit map(s)... (... area...time...type).	I am going to transmit map(s) ... (...area...time....type).	ZLH
		Reverse material on drum and rerun until I break you.	ZLI
	What size lettering shall I use?	Use... (1. Standard telegraphic typewriter; 2. Jumbo type- writer if available; 3. Hand lettering at least 3/16 of an inch high.)	ZLJ
FAULTY	...(1. Does my...appear to be faulty; 2. Is your...faulty).	...(1. Your...appears to be faulty; 2. My...is faulty).	ZTC
FREQUENCY		Shift to transmit and receive on... kHz (or MHz); if communication is not established within 5 minutes, revert to present frequency.	QMH
	Will you tell me my exact frequency (or that of...)?	Your exact frequency (or that of...) is...kHz (or MHz).	QRG
	Does my frequency vary?	Your frequency varies.	QRH
	What working frequency will you use?	I will use the working frequency... kHz (normally only the last three figures of the frequency need be given).	QSS
	Shall I change to transmission on another frequency?	Change to transmission on another frequency (or on... kHz (or MHz)).	QSY
	Will you send your call sign for tuning purposes or so that your frequency can be measured now (or at... hours) on...kHz (or MHz)?	I will send my call sign for tuning purposes or so that my frequency may be measured now (or at... hours) on...kHz (or MHz).	QTS
	Shall I decrease frequency very slightly (or... kHz) to clear interference?	Decrease frequency very slightly (or...kHz) to clear interference.	ZHA
	Shall I increase frequency very slightly (or... kHz) to clear interference?	Increase frequency very slightly (or...kHz) to clear interference.	ZHB
FREQUENCY (Cont'd)	How does my frequency check?	Your frequency is... (1. Correct; 2. Slightly (or...Hz (or kHz)) high; 3. Slightly (or...Hz (or kHz)) low; 4. Stable on steady	ZRA



		mark; 5. Stable on steady space; 6. Unstable; 7. Erratic).	
		Check your (or...'s) frequency on this circuit (or on...kHz(or MHz)).	ZRB
	What is the frequency of the... radio facility now in operation?	The frequency of the...radio facility now in operation is...	ZRD
	On what frequency do you hear me best?	I hear you best on...kHz (or MHz).	ZRE
	Will you send tuning signal on your present frequency (or on kHz (or MHz)) for one minute, or until as is given?	Am about to send tuning signal on my present frequency (or on... kHz (or MHz)).	ZRF
	When will a change of frequency (to...kHz (or MHz)) be necessary?	A change in frequency (to... kHz (or MHz)) will be necessary at approximately...	ZRG
	Are my tone frequencies correct?	Your tone for... (1. Marking and spacing are high; 2. Marking and spacing are low; 3. Marking and spacing are correct).	ZRU
FREQUENCY SHIFT	Is my frequency shift... 1) too wide? 2) too narrow? 3) correct?	You frequency shift is... 1) too wide. 2) too narrow (by...Hz). 3) correct.	QJE
	Is my frequency shift correct?	Your frequency shift is... (1. Too wide; 2. Too narrow; 3. Not linear; 4. Correct) (by...Hz).	ZRH
LINE	Will you... (1. disconnect your equipment from line and carry out local test, reconnecting to line in... minutes; 2. connect your transmit line to your receive line to enable me to carry out a loop test for... minutes)?	I will...(1. disconnect (or I am disconnecting) my equipment from line and carry (or to carry) out local test reconnecting line in...minutes; 2. connect my transmit line to my receive line to enable you to carry out a loop test for... minutes).	ZTR
	Is the line satisfactory	The line is...(1. Satisfactory; 2. unsatisfactory).	ZTS
LINES	What is (are) the magnetic line(s) of shoot of the...(facility)?	The magnetic line(s) of shoot of the...(facility) is (are) ...degrees.	ZLP
LISTEN		Please listen for me on...kHz (or MHz) and transmit to me on...kHz (or MHz).	ZHQ
MARK/SPACE	Is my... 1) tape) 2) mark and space) reversed?	Your... 1) tape) 2) mark and space) is reversed.	QJA
	Will you transmit a	I am transmitting a continuous...	QJI

	continuous.. 1) mark? 2) space?	1) mark. 2) space.	
	Are you receiving... 1) a continuous mark? 2) a continuous space? 3) a mark bias? 4) a space bias?	I am receiving... 1) a continuous mark. 2) a continuous space. 3) a mark bias. 4) a space bias.	QJK
		You are transmitting a continuous...(1. Mark; 2. Space).	ZBC
METHOD	Will you use... 1) radio? 2) cable? 3) telegraph? 4) teletypewriter? 5) telephone? 6) receiver? 7) transmitter? 8) reperforator?	I will use... 1) radio. 2) cable. 3) telegraph. 4) teletypewriter. 5) telephone. 6) receiver. 7) transmitter. 8) reperforator.	QJB
		...(class of omission/type of transmission as indicated in Chapter 6).	ZTG
MODULATION	What is the duration of your modulation cycle?	The duration of my modulation cycle is... <u>50 Baud Equipment</u> 1) 148 ms (7.42 units) fast. 2) 150 ms (7.5 units) correct. 3) 152 ms (7.6 units) slow. 4) ...erratic per character.  <u>45.5 Baud Equipment</u> 1) 161 ms (7.35 units) fast. 2) 163 ms (7.42 units) correct. 3) 165 ms (7.5 units) slow. 4) ...erratic per character.	ZTP
MONITOR		My signal as checked by monitor... is satisfactory... 1) locally. 2) as radiated.	QJF
	Will you monitor...station and report regarding range, quality, etc.?	I have monitored... station and report (briefly) as follows...	QLB
PATCH	Will you patch me through to... (via you or ...)?	I am about to patch you through to...(via...)	ZAF
POWER	Shall I increase transmitter power?	Increase transmitter power.	QRO
	Shall I decrease transmitter power?	Decrease transmitter power.	QRP
		Maximum power is now being	ZPE

		radiated.	
RADIATION		Your transmitter has strong radiation while idling.	ZPB
		Radiate full unmodulated power for...minutes.	ZRT
REPAIRS	Are repairs completed?	Repairs... (1. Completed; 2. Uncompleted. Estimated completion time...minutes; 3. Can not be completed because...)	ZTF
SATELLITE		Satellite(s) is/are preempted from.....Z to.....Z	ZCA
		Change to double-hop working using satellites... West and...East now (or at ...hours)	ZCB
		Establish....on access... channel (A/B) 1) 300 dB Emergency patch. 2) Phase-reverse-keying	ZCC
		Weight your access to ..... (call sign) by .....dB.	ZCD
		Access satellite .....now (or at....hours) with..... 1) Spread Spectrum Modulation (normal allocation). 2) Spread Spectrum Modulator changed to access... 3) Spread Spectrum Demodulator changed to access... 4) Frequency modulation. 5) Phase Shift Keying Modulation.	ZCE
		Remove access...now (or at...hrs) 1) Spread Spectrum Modulation (1 - 40) 2) Frequency Modulation. 3) Phase reverse keying. 4) Phase Shift Keying Modulation.	ZCF
	What is your frequency modulation deviation?	My frequency modulation is.....	ZCG
	What is your tracking mode?	My tracking mode is..... 1) Autotrack. 2) Manual tracking. 3) Hand barring.	ZCH
SATELLITE (Cont'd)	What is your.....? 1) Total output power. 2) Quality meter reading.	My 1) is .....watts 2) is .....xxx%	ZCI

	3) Number of accesses. 4) Frequency modulation access power.	3) ..... accesses. 4) ..... watts.	
	Are you experiencing equipment trouble?	I am experiencing trouble with my ..... 1) Spread Spectrum Modulator. 2) Frequency division multiplex equipment. 3) Line modem. 4) Time division multiplex equipment. 5) Switching or patching. 6) Servo system. 7) Transmitter 8) Receiver. 9) Parametric amplifier. 10) Phase Shift Keying Modulator.	ZCJ
	Shall I loop my .....? 1) Spread Spectrum Modulator channel (A/B) 2) Line modem 3) Time division multiplex equipment. 4) Frequency division multiplex equipment.	Loop your ..... 1) Spread Spectrum Modulator channel..... 2) Line modem. 3) Time division multiplex equipment. 4) Frequency division multiplex equipment.	ZCK
	Have you checked speed setting of all equipment on.....(channel/circuit)	I have checked speed setting on..... (channel/circuit).	ZCL
	May I carry out....on satellite...? 1) Spread Spectrum Modulation back-to-back check. 2) Range measurement. 3) Power Balance.	Carry out ....on satellite.... 1) Spread Spectrum Modulation back-to-back check. 2) Range measurement. 3) Power Balance.	ZCM
	Are you ready to synchronize Spread Spectrum Access?	I am ready to synchronize Spread Spectrum Access.....	ZCN
		On your FM/FDM Access..... 1) Suppress telegraph channel ..... (1 - 9) 2) Open telegraph channel..... (1 - 9)	ZCO
SATELLITE (Cont'd)		Change (total) radiated power.... 1) On narrow-band to....watts. 2) On Spread Spectrum....watts. Note: This power excluded that for access D or E. 3) Of access....(1-40, N1-N5, D or E) to .....(watts)	ZCP

		4) Of access....(1-40, RAE) to.... (0,3,6,9 dB) below full access at Combiner Unit.	
		Change FM/FDM mode to Mode... (A/D) with deviation ....kHz	ZCQ
		I am about to initiate.... 1) Serial 2) Parallel synchronization of accesses..... and ....	ZCR
		Switch your Spread Spectrum Access.... modulator to.... 1) Code off 2) Search 3) Sync. 1 4) Sync. 2 5) Traffic 6) Channel A Normal On. 7) Channel B Normal On.	ZCS
		My Spread Spectrum Access demodulator is..... 1) CW tuned 2) In short-code lock 3) In long-code lock 4) In long-code and data lock on Channel A only 5) In long-code and data lock on both channels.	ZCT
		Set Spread Spectrum Access...to... 1) Channel A only. 2) Channel A and B retaining original radiated power for this access.	ZCU
		Set speed of Spread Spectrum Access.....Channel.....(A/B) to..... 1) 1300 bd. 4) 1200 bd. 2) 2600 bd. 5) 2400 bd. 3) 600 bd. 6) 4800 bd.	ZCV
SATELLITE (Cont'd)		1) Check your...and advise 2) I have lost ..... 3) Perform back to back through..... 4) Bypass 5) I have bypassed 6) Retune demodulator To be used in conjunction with ZCX.	ZCW

		1) Test loop 1 2) Test loop 2 3) Test loop 3 4) Test loop 4 5) Paramp 6) High Power Amplifier 7) Demodulator 8) Mux Channel A 9) Mux Channel B 10) Demux Channel A 11) Demux Channel B 12) Coder 13) Decoder 14) Tracking (including side lobe) 15) 5 MHz standard 16) Synthesizer 17) Power Supply 18) Modulator 19) Satellite 20) Crypto Equipment 21) Patching DC 22) Patching RF 23) Patching Clock	ZCX
		Operate at....(BPS)..... 1) 75 2) 84 3) 150 4) 168 5) 300 6) 336 7) 600 8) 672 9) 1200 10) 2400 11) 4800 12) 9600 To be used in conjunction with ZCZ	ZCY
SATELLITE (Cont'd)		1) Coded 2) Uncoded 3) Satellite Access Channel at.... dBW 4) Relinquish Satellite Access due to sole access..... 5) Relinquish Satellite Access due to violation of Power Restrictions 6) Increase Power to .... dBW	ZCZ

		7) Decrease Power to .... dBW 8) NB ALPHA 9) NB BRAVO 10) Change Satellite Access Channel to....at dBW 11) Satellite	
SIDE BAND	Can you receive both sidebands of my Independent sideband transmissions?	I can receive... (1. The upper sideband; 2. The lower sideband; 3. Both sidebands).	ZRM
	Do you intend to transmit on... (1. The upper sideband; 2. The lower sideband; 3. Both sidebands independently?	I intend to transmit on... (1. The upper sideband; 2. The lower sideband; 3. Both sidebands independently	ZRN
		Change to other sideband	ZQR
SIGNAL QUALITY	What is the commercial quality of my signals?	The quality of your signal is ... 1) not commercial 2) marginally commercial 3) commercial (MARITIME USE ONLY)	QOF
	How is the tone of my transmission?	The tone of your transmission is... 1) good. 2) variable 3) bad	QRI
	What is the intelligibility of my signals (or those of....)?	The intelligibility of your signals (or those of...) is... 1) bad. 2) poor 3) fair 4) good 5) excellent	QRK
		Your signals are... (1. Fading badly; 2. Fading slightly; 3. Good for...words per minute; 4. Getting stronger; 5. Getting weaker).	ZPC
	Is your signal as checked by monitor .... satisfactory (1. Locally; 2. As radiated)?	My signal as checked by monitor....is satisfactory (1. Locally; 2. as radiated).	ZPD
SIGNAL QUALITY (Cont'd)	What is the readability of the signals of the group (net) (or of...)?	The readability of the signals of the group (net) (or of...) is.... (1 to 5)	ZPF
	What is (are) signal strength(s) of group (net) (or of...)?	Signal strength(s) of group (net) is (are) (or of...) is... (1 to 5)	ZPG
		This transmission is a transmitter pre-acceptance trial. Request expeditious strength and readability reply.	ZPT
SIGNAL	What is the strength of my	The strength of your signals (or	QSA

STRENGTH	signals (or those of...)?	those of...) is... 1) scarcely perceptible. 2) weak. 3) fairly good. 4) good 5) very good	
	Are my signals fading?	Your signals are fading.	QSB
SPEED KEY		Your speed key is improperly adjusted.	ZAB
SPEECH		Your speech is distorted.	ZPA
SYNCHRO- NISATION		Retransmit phasing signal.... 1) You did not synchronize 2) Check your daily key setting	ZRW
TAPE	Is my... 1) tape) 2) mark and space) reversed?	Your... 1) tape) 2) mark and space) is reversed.	QJA
	Shall I run... 1) my test tape? 2) a test sentence?	Run... 1) your test tape. 2) a test sentence.	QJH
	How many tapes have you to send?	I have...tapes to send (MARITIME USE ONLY)	QOG
	Shall I send my tape?	Send your tape. (MARITIME USE ONLY)	QOI
	Shall I transmit 12 inches of blank tape at short intervals at...words per minute?	Transmit 12 inches of blank tape at short intervals at... words per minute.	ZAW
		Your...is reversed. (1. Tape; 2. Mark and space).	ZBN
TECHNICIAN	Will you... (1. get the Circuit Engineer/Facility Control Technician to speak on this circuit (or circuit...); 2. hand the line over to the Circuit Engineer/Facility Control Technician for check)?	I will...(1. get the Circuit Engineer/Facility Control Technician to speak on the circuit; 2. hand the line over to the Circuit Engineer/Facility Control Technician for check and call you when check has been completed).	ZTQ
TELETYPE RANGE	What is teletype range taken on my signal(s)?	Teletype range taken on your signal(s) is...to...	ZAU
TEST	Shall I run... 1) my test tape? 2) a test sentence?	Run... 1) your test tape. 2) a test sentence.	QJH
	Shall I send a phasing signal for ... seconds?	Send a phasing signal for ... seconds. (MARITIME USE ONLY)	QOH
		Run... 1) Caller; 2) Test tape; 3) Synchronizing tape;	ZAI



		4) Traffic tape; 5) Marking signals; 6) Spacing signals; 7) Reversals; 8) Run teletypewriter space bar signals). 9) Date 1 test at...bd	
TRIAL		This transmission is a transmitter pre-acceptance trial. Request expeditious strength and readability reply.	ZPT
TRANSMITTER		One or more transmitters, simultaneously keying on this broadcast, are defective but transmission will continue on remaining transmitters. Traffic so transmitted will be repeated when full service is restored.	ZAZ
TUNE	Shall I tune my transmitter to... 1) Proper frequency; 2) Zero beat with your (or...) transmitter)?	Tune your transmitter to... 1) Proper frequency; 2) Zero beat with my (or...) transmitter).	ZRC
USE	Shall I use...?	Use...	ZTD
	Are you (or is...) able to use...?	I am (or...is) able to use...	ZTE
		Cease using...	ZTJ
		I am (or...is) unable to use... Note: Class of emission/type of transmission may be indicated using the signal ZTG and Chapter 6 (see para 104.m.).	ZTM

**SECTION G****ENCODE****CIRCUIT DISCIPLINE AND NET CONTROL**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
ACKNOWLEDGE	Can you acknowledge receipt?	I am acknowledging receipt.	QSL
ANSWER		Answer me (or...) on...kHz.(or MHz)	ZBV
AUTOMATIC	Shall I revert to automatic relay?	Revert to automatic relay.	QJG
BEADWINDOW PROCEDURE		You have disclosed an EEFI as indicated. 1) Position      6) COMSEC 2) Capabilities 7) Wrong Circuit 3) Operations   8) (SPARE) 4) EW             9) (SPARE) 5) Personnel    10) (SPARE)	ZNX
	* Note: See ACP 124 for details of BEADWINDOW procedure and the use of EEFI numbers.		
BREAK		I have been unable to break in on your transmission. or Will you inform...(call sign) that I have been unable to break in on his transmission (on...kHz (or MHz)).	QSI
		I have (or...has) been unable to break you.	ZAJ
		I am unable to receive you while I am transmitting. Do not use break-in procedure.	ZBL
BUSY	Are you busy?	I am busy (or I am busy with...). Please do not interfere.	QRL
CALL/ CALLING	When will you call me again?	I will call you again at...hours (on...kHz (or MHz)).	QRX
	Who is calling me?	You are being called by... (on...kHz (or...MHz)).	QRZ
		Make preliminary call before transmitting traffic.	ZBH

		I am or have been (or...is or has been) calling you (on... kHz (or MHz)).	ZGI
	When will you call me again on present frequency (or on...kHz (or MHz))?	I will call you again as soon as possible (or at...) on present frequency (or on...kHz (or MHz)).	ZGJ
CALL/ CALLING (Cont'd)	When shall I call you again on present frequency (or on...kHz (or ...MHz))?	Call me again at...on present frequency (or on...kHz (or...MHz))	ZGK
		...will answer calls for me (or for...)	ZGL
		Answer calls for me on present frequency (or on...kHz (or MHz)).	ZGP
CALL SIGN	What is your full call sign?	My full call sign is... or Use your full call sign until further notice.	QCX
	What is my call sign for use on this circuit only?	Your call sign for use on this circuit only is...	ZGA
		Send (answer) ... 1) In alphabetical sequence of call signs. Each station to make its call signs once (or...times); 2) In the following sequence of call signs).	ZGB
		Two stations are using the same indefinite call sign on...kHz (or MHz). Both stations are to select different call signs	ZGD
		Send your call sign(s) once (or ... times) on this frequency (or on...kHz (or MHz)).	ZGE
		Make call signs more distinctly.	ZGF
	What is call sign of... (1. Friendly striking force aircraft; 2. Friendly shadowing aircraft; 3. Incoming vessel; 4. Senior officer present afloat (or officer in tactical command); 5. Ship acting as flagship for...)?	Call sign of...is... (1. Friendly striking force aircraft; 2. Friendly shadowing aircraft; 3. Incoming vessel; 4. Senior officer present afloat (or officer in tactical command); 5. Ship acting as flagship for...).	ZGG
CALL SIGN	Is your vessel fitted for	My vessel is fitted for reception	QOL

(SELECTIVE)	reception of selective calls? If so, what is your selective call number or signal?	of selective calls. My selective call number or signal is... (MARITIME USE ONLY)	
	On what frequencies can your vessel be reached by a selective call?	My vessel can be reached by a selective call on the following frequency(ies) ...(period of time to be added if necessary). (MARITIME USE ONLY)	QOM
CLOSING		I am closing down (until...)	ZAL
	May I close down (until...)?	... (1. Close down (until...); 2. I am closing down (until...)).	ZKJ
COMMUNICATE WITH	May I establish communication with... radio station on... kHz (or MHz) now (or at...hours)?	Establish communication with... radio station on...kHz (or MHz) now (or at...hours). or I will establish communication with...radio station on...kHz (or MHz) now (or at...hours).	QIC
	Can you communicate with...direct or by relay?	I can communicate with... direct (or by relay through...).	QSO
	Can you communicate with my station by means of the international code of signals?	I am going to communicate with your station by means of the international code of signals.	QTQ
	Will you keep your station open for further communication with me until further notice (or until) ...hours)?	I will keep my station open for further communication with you until further notice (or until...hours).	QTX
		Report when you are in radio communications with....	ZBU
	Did you (or...) hear...(at...)?	I have (or...has) been unable to communicate with...(since ...).	ZGM
CONTROL STATION	Who is controlling station (net control station) on this frequency(or on...kHz(or MHz))?	I am (or...is) controlling station (net control station) on this frequency (or on...kHz (or MHz)).	ZKA
	Is it necessary to obtain the permission of the controlling station (net control station) before transmitting messages?	It is necessary to obtain the permission of the controlling station (net control station) before transmitting messages.	ZKB
		Substitute code sign (call sign) of control station of group (net) in place of this operating signal.	ZKC
	Shall I take control of net (for...) (until ...)?	Take control of net (for...) (until...)	ZKD
COPIES		For following message you will require a total of...copies.	ZBB

		For the following message use large message forms.	ZBF
DELAY	Do you hear my call; is the approximate delay in minutes before we may exchange traffic?	I hear your call; the approximate delay is.... minutes. ( <u>MARITIME USE ONLY</u> )	QOT
		Transmission on...kHz (or MHz) suspended until... (or was suspended at...) on account of electrical hazards (or...).	ZAK
	What is cause of delay (or of bad transmission)?	Delay (or bad transmission) due to...	ZBA
		I am using this transmitter to answer calls on two or more frequencies. Answer to calls may be delayed.	ZGH
DISCIPLINE		You are not observing proper circuit discipline.	ZAA
FREQUENCY		My reception on...frequency has broken down.	QCS
	What frequency is...using?	...is using...kHz (or MHz).	QIF
		Shift to transmit and receive on... kHz (or MHz); if communication is not established within 5 mins, revert to present frequency	QMH
	Shall I change to transmission on another frequency?	Change to transmission on another frequency (or on...kHz (or MHz)).	QSY
	Will you shift (or ask...to shift) to transmit on...kHz (or MHz)?	I am (or...is) shifting to transmit on...kHz (or MHz).	ZBW
	Will you shift (or ask...to shift) to receive on...kHz (or MHz)?	I am (or...is) shifting to receive on...kHz (or MHz).	ZBX
GROUPS	Shall I send each word or group more than once?	Send each word or group twice(or...times).	QSZ
	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.	QTB
		The last word (or group)... 1) Received from you was...; 2) Transmitted to you was...).	ZAQ
GUARD	May I stop listening on the watch frequency for...minutes?	You may stop listening on the watch frequency for...minutes.	QAR
	Shall I stand guard for you on the frequency of...kHz (or MHz) (from...to... hours)?	Stand guard for me on the frequency of...kHz (or MHz) (from...to...hours).	QTV

		Take guard (for...) on...kHz (or MHz))	ZKM
		I have taken over guard on...kHz (or MHz).	ZKN
		I have handed over guard (to...) (on...kHz (or MHz)) (serial number of last message received was...).	ZKO
	Are you (or is...) radio guard for...(on...kHz (or MHz))?	I am (or...is) radio guard for...(on...kHz (or MHz)).	ZKP
		Indicate ships or stations for which you are (or...is)... guard. 1) Radio (on...kHz (or MHz)); 2) Visual).	ZKQ
HEARD	When was I (or...) last heard?	Nothing heard from you (or...) (since...).	ZGN
IDENTIFI- CATION		The identification signal which follows is super-imposed on another transmission.	QTT
INTERFER- ENCE	Are you experiencing communication difficulties through flying in a storm?	I am experiencing communication difficulties through flying in a storm. Note: Attention is invited to the possible supplementary use of signals QAR, QBE, QCS, QRM, QRN, QRX, QSZ or the signal CL to amplify the meaning associated with signal QAZ.	QAZ
	Are you being interfered with?	I am being interfered with.	QRM
	Are you troubled by static?	I am troubled by static.	QRN
		You are..(1. Causing interference. Listen before sending; 2. Causing interference by in-attention to order to wait; 3. Sending at the same time as...(call sign); 4. Causing delay by slowness in answering; 5. Causing delay by slowness in answering my service or procedure messages; 6. Answering out of turn).	ZAX
KEYING	Will you use simultaneous keying on...frequency and...frequency?	I will now key simultaneously on... frequency and...frequency.	QLH
	Is my keying defective?	Your keying is defective.	QSD
		Your...(1. Characters are indistinct; 2. Spacing is bad).	ZBP

		Your...(1. Dots are too heavy; 2. Dots are too light; 3. Dots are varying in bias; 4. Dot spacing is bad; 5. Dots are missing; 6. Dots are burring.).	ZBS
LEAVING NET		Station leaves net temporarily (or for...minutes) (to communicate with...) (will be on...kHz (or MHz))	ZKF
LINK		Act as radio link (relaying station) between me and... (or between...and...).	ZOD
LISTEN	Shall I listen for you (or for...) on...kHz(or MHz)? Note: If the frequency is given in megacycles, the abbreviation MC is to be used. (See also signal QSX).	Listen for me (or for...) on... kHz (...MHz). Note: If the frequency is given in megacycles, the abbreviation MC is to be used. (See also signal QSX)	QAP
	Will you listen to...(call sign(s) on... kHz (or MHz)?	I am listening to...(call sign(s)) on kHz (or MHz).	QSX
		Listen for radiotelephony.	ZBI
MESSAGES	Has...sent any message for me?	Here is the message sent by... at...hours.	QBM
MESSAGES (Cont'd)	Have you sent message...to...?	I have sent message...to...	QDB
	Have you anything for me?	I have nothing for you.	QRU
METHOD	Shall I work... 1. Simplex; 2. Duplex 3. Diplex; 4. Multiplex; 5. Single Sideband; 6. With automatic error correction system; 7. Without automatic error correction system; 8. With time, and frequency diversity modem)?	Work...(1. Simplex; 2. Duplex; 3. Diplex; 4. Multiplex; 5. Single Sideband; 6. With automatic error correction system; 7. Without automatic error correction system; 8. With time and frequency diversity modem).	ZAP
		Transmit traffic for me (or for...) by broadcast method until further directed (or until...).	ZAV
		Transmit traffic to me (or to... on...kHz (or MHz)) without waiting for receipts. I (or...) will receipt for traffic later (on...kHz (or MHz)).	ZAY
	Shall I send by...(1. Direct(R) method; 2. Broadcast (F) method; 3. Intercept(I) method;	Send by...(1. Direct (R) method; 2. Broadcast (F) method; 3. Intercept (I) method; 4. Repeat	ZBR

	4. Repeat back (G) method)?	back (G) method).	
OPERATING SIGNAL		Your operating signal (made at...) received as...(1. Not understood; 2. Not held).	ZAD
OPERATION	May I resume normal working?	Normal working may be resumed.	QUM
OPERATOR		Place...on watch on the frequency 1) A qualified speed key operator; 2) A competent operator).	ZBM
PRECEDENCE		Transmit only messages of and above precedence...	ZAN
	Of what precedence(s) and for whom is (are) your message(s)?	I have (or...has)...(numeral followed by precedence prosign for each precedence) message(s) for you (or for...).	ZBO
READY	Are you ready?	I am ready.	QRV
RECEPTION		My reception on...frequency has broken down.	QCS
	Can you hear me between your signals and if so can I break in on your transmission?	I can hear you between my signals; break in on my transmission.	QSK
	Did you hear me(or...(call sign) on...kHz (or MHz)?	I did hear you (or...(call sign) on...kHz (or MHz).	QSN
		I am unable to receive you. Receipt through...	ZAE
	Are you receiving my traffic clear?	I am receiving your traffic... (1. Clear; 2. Garbled).	ZBK
REPEAT	Will you repeat what you (or...) sent (at...)?	Following is what I (or...) sent (at...).	ZBD
		Send tapes...(1. Once; 2. Twice).	ZSO
REPORTING IN NET		I (or...) report(s) into circuit (net).	ZKE
SCHEDULE		Observe (or direct... to observe) schedule with... on...kHz (or MHz)(at...).	ZKG
	Did you (or...) observe schedule with...(at...)?	I (or...) observed schedule with...(at...).	ZKH
SPEECH		I cannot understand your speech. Use radiotelegraph.	ZAO
		Your speech is distorted.	ZPA
SPEED	Shall I send faster?	Send faster (...words per minute).	QRQ
	Shall I send more slowly?	Send more slowly (...words per minute).	QRS
	Shall I stop sending?	Stop sending.	QRT



SPEED KEY		Your speed key is improperly adjusted.	ZAB
		Cease using speed key.	ZAC
STAND BY		Stand by.	ZUJ
STATION IDENTITY	What is your full call sign?	My full call sign is... or Use your full call sign until further notice.	QCX
	What is the name of your station?	The name of my station is...	QRA
STRENGTH SIGNAL	What is the strength of my signals (or those of...)?	The strength of your signals (or those of...) is... 1) scarcely perceptible. 2) weak. 3) fairly good. 4) good 5) very good	QSA
	Are my signals fading?	Your signals are fading.	QSB
TAPE		Break...(1. Go ahead with next tape; 2. Go back...feet; 3. Advance your key tape to reference mark number...and repeat last transmission (or transmission...).	ZAG
		Run...(1. Caller; 2. Test tape; 3. Synchronizing tape; 4. Traffic tape; 5. Marking signals; 6. Spacing signals; 7. Reversals; 8. Run teletypewriter space bar signals). 9. Date I Test at....Bd	ZAI
TAPE (Cont'd)		I am unable to obtain reply from teleprinter switchboard... (for connection to...). Request you call him (or other intermediate switchboard) for me.	ZAM
		Rerun all tapes run on...since... (1. Your present frequency; 2. ...kHz (or MHz); 3. Call sign...; 4. This channel or... channel).	ZAS
		Am preparing traffic (perforating tape) for transmission.	ZAT
		You are transmitting a continuous...(1. Mark; 2. Space).	ZBC
		You are transmitting in upper case.	ZBG
		Your...is reversed. (1. Tape;	ZBN

		2. Mark and space).	
		Send tapes (or message)... (1. Once; 2. Twice).	ZSO
TIME	What is the correct time?	The correct time is...hours.	QTR
	What are the hours during which your station is open?	My station is open from...to... hours	QTU
TRANSMIT	Shall I send or reply on this frequency (or on...kHz (or MHz)) (with emissions of class...)?	Send or reply on this frequency (or on...kHz (or MHz)) with emissions of class...).	QSU
	Will you send on this frequency (or on...kHz (or MHz)) with emissions of class...)?	I am going to send on this frequency (or on...kHz (or MHz)) (with emissions of (with class...)).	QSW
		Please listen for me on...kHz (or MHz) and transmit to me on... kHz (or MHz).	ZHQ
TUNING	Shall I send a series of V's on this frequency (or...kHz (or MHz))?	Send a series of V's on this frequency (or on...kHz (or MHz)).	QSV
TURN		Delay is being caused by... 1) your transmitting out of turn. 2) your slowness in answering. 3) lack of your reply to my...	QCB
	What is my turn?  (Relates to communication.)	Your turn is number...(or according to any other indication (Relates to communication.))	QRY
	What is my number and sequence in answering?	Your number is... Answer after number... (numbers to be separated by separative sign).	ZGO
WATCH		Have set continuous watch, or 1) Single operator period; 2) Two operator period; 3) General periods only; 4_ Reduced single operator periods) on broadcast indicated. First serial number received is.../No number yet received.	ZIP
		Have ceased watch on Broadcast, last number received...	ZIQ
		Set watch on...kHz (or MHz)... (1. Continuous; 2. Until further notice).	ZKI
		Assume radiotelegraph (wireless) organization...forthwith(or at...).	ZKK
		Resume normal radio	ZKL

	communication now (or at...).	
On what frequencies are you (or...) maintaining watch?	I am (or...is) maintaining watch on...kHz (or MHz).	ZKR
What stations are keeping watch on...kHz (or MHz) (or are in net)?	Following stations are keeping watch on...kHz (or MHz) (or are in net).	ZKS
	I am keeping watch on...kHz (or MHz) for...(1. First five minutes in each half hour; 2. From 10 to 15 and 40 to 45 minutes past the hour; 3. Between...and...minutes past the hour).	ZKT
	I am (or...is) maintaining continuous watch, or (1. Single operator period; 2. Two operator period; 3. General periods only; 4. Reduced single operator period) on...(call sign)...Broadcast.	ZKU
	I am (or...is) standing split phone watch on...and...kHz (or MHz).	ZKV

**SECTION H****ENCODE****MESSAGE HANDLING**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
ACCURACY		Accuracy of following message(s) or (message...) is doubtful. Correction or confirmation will be forthcoming.	ZDG
		Accuracy of...portion of following message (or message...) is doubtful. Correction or confirmation will be forwarded when received. (1. Heading; 2. Text; 3. Group...to...)	ZEH
		Accuracy is doubtful of heading of message received as follows... Check to station of origin if necessary and repeat.	ZEI
ACKNOWLEDGE	Request you acknowledge message	Message (or message...) is acknowledged.	ZEV
ANSWER		No answer is required.	ZEK
ATTENTION INVITED		Your attention is invited, for... (1. Action; 2. Information), to message...which is in your files.	ZEW
BASEGRAM		Message...is being delivered as a basegram message.	ZFO
		Basegram	ZFP
BOOK MESSAGE		This is a multiple-address or book message tape containing...routing indicators in the routing line which is to be routed in accordance with the established doctrine.	ZDR
		This is a multiple-address or book message tape containing... routing indicators in the routing line for which the station called in the pilot is responsible.	ZER
		This is a book message and may	ZEX

		be delivered as a single-address message to addressees for whom you are responsible.	
BOOK MESSAGE (Cont'd)		When delivery is effected of this book message to addressee by commercial means, or when copy is forwarded to confirm message previously delivered by telephone, it is to be sent as a single address message. (May only be used in conjunction with ZEX).	ZEZ
BROADCAST		Pass...(1. On Broadcast...; 2. On Broadcast...single operator; 3. On Broadcast... two operator period; 4. On Broadcast...general periods only).	ZBY
		In addition to the regular broadcast times, this hydrographic message is to be transmitted on the following hydrographic schedules... (1. ...schedules; 2. All schedules on...(date); 3. All schedules from...to...(dates inclusive)).	ZDW
		This message (or message...) has been (or will be put on the...broadcast schedules (serial number...).	ZEY
	Was there any traffic addressed to me on...broadcast schedule between serial numbers...and...?	Following traffic was addressed to you on...broadcast schedule between serial numbers...and...	ZFL
		Place this message (or message...) on...(1. Continuous wave broadcast; 2. Radio teletype broadcast) indicated by following specific broadcast designator(s)...	ZON
		This message (or message...) has been delivered to all broadcast areas (or to the following specific broadcast area(s)...).	ZOP
		Deliver this message (or message ...) to all broadcast areas (or to the following specific broadcast area(s)...).	ZOQ
		Broadcast this message at special	ZOW

		watch keeping periods for ships with (1. One radio operator; 2. Two radio operators).	
		Place this message (or message...) on...(1. Morse/CW; 2. RATT) submarine broadcast indicated by following specific broadcast designator(s)...	ZOX
BROADCAST (Cont'd)		This message (or message...) is forwarded to you for screening and determination of need for broadcast promulgation. Advise broadcast control commander of recommended message disposition.	ZPX
		This message (or message...) has been screened by command authority and requires broadcast delivery.	ZPY
CALL SIGN		The following group is a call sign, delivery group or address group. (Used in plain language texts of messages other than procedure messages.)	ZXA
CONCERN	Does message... (or station serial number...) concern me (or...)?	Message...(or station serial number...) 1. Does not concern you (or...); 2. No longer concerns you (or...).	ZFK
CONFIRM- ATION		Confirmation...(1. Was omitted; 2. Differs from text).	ZDL
		The following confirmatory information as received is at variance with the text.	ZED
COPIES		For following message you will require a total of ...copies.	ZBB
		For following message use large message forms.	ZBF
CORRECTIO N		Request corrected copy of message... be forwarded to...	ZDH
		Message (or message...) which you have (or...has) just forwarded was incorrectly transmitted. Correct version of message (or part of portion...) is...	ZDS
	Is message...a correction to message...which was	This message is a correction (to message...) (transmitted by...).	ZEL

	previously transmitted with doubtful or missing groups (words)?	Note: May only be used in conjunction with ZDG.	
		Make message...same channel or station serial number as this procedures message.	ZFS
		This is corrected version number.. (1. One; 2. Two; etc.) of a message previously transmitted with errors and/or omitted portions.	ZOJ
CORRECTION (Cont'd)		Correct version of the part of the last message (or message...) which was sent incorrectly is...(or will be found in...).	ZWN
DELIVERY		Message...was: (1. received by (addressee(s) designation) at...Z. 2. Received by (addressee(s) designation communications center) at...Z. 3. Delivered to (addressee(s) designation) by broadcast at...Z. 4. Forwarded to (addressee(s) designation) by commercial means at...Z. 5. Mailed to (addressee(s) designation) at...Z.	ZDF
		Report disposal of message... your station with any reason for delay.	ZDN
		On...(date) message(s) was (were) mailed to...(command(s)) bearing serial-numbers...	ZDZ
		This message has been delivered by a separate transmission or by other means (1. Messenger/ courier; 2. Mail) to the addressee(s) immediately following this operating signal.	ZEN
		Transmit this message by rapid means when no charges are involved and to all others by mail.	ZEO
		Message...has been protected and no further action by... is required.	ZET
		When delivery is effected of this book message to addressee by	ZEZ

DELIVERY (Cont'd)		commercial means, or when copy is forwarded to confirm message previously delivered by telephone, it is to be sent as a single address message. (May only be used in conjunction with ZEX).	
		Inform me when this message (or message...) has been received by... (addressee designation) or by... (1. Action addressee(s); 2. Information addressee(s); 3. All addressees; 4. Action addressees' message center; 5. Information addressees' message center; 6. All addressees' message center). Note: Not authorized for used on general messages.	ZFF
		Originator has indicated that this message should be forwarded without service action on the text at relay or addressee stations, as the information conveyed is...(1. Perishable; 2. For information only and will be confirmed by other means).	ZNZ
		Take (I will take) no further action regarding forwarding message...	ZOB
		Delivery of this message by mail in lieu of broadcast permissible (to...).	ZOM
		If more than one tropical wind warning message in this sequence is awaiting transmission, transmit highest serial number first. (Sequence/serial is understood to include tropical warning name or number and consecutive warning number).	ZPU
		If the earlier wind warnings identified by DTG(s) following this signal are awaiting transmission, file those warnings without further transmission.	ZPV



		This message canceled at time indicated. File without further transmission.	ZPW
		This message is to be delivered to the addressee(s) in tape form.	ZXD
		This message has been delivered to all action addressees whose designations follow this operating signal.	ZXW
		This message has been delivered to all information addressees whose designations follow this operating signal.	ZXX
DUPLICATE		Messages up to and including serial (or circuit) number... have been previously transmitted.	ZDX
		This message is a suspected duplicate.	ZFD
		This message is an exact duplicate of a message previously transmitted, and is to be delivered to all appropriate addressees served by the receiving facility.	ZFG
EXECUTION	Does the last message (or message...) require a signal of execution?	Last message (or message...) requires a signal of execution.	ZDC
	Have you received (or sent) the executive signal ("Execute") for message...?	Executive signal ("Execute") for last message (or following message) has been made (or was made at...).	ZFC
EXERCISE		Exercise messages are not to be sent until further orders (or until...).	ZDT
		This message is not to be decrypted or reported outside the communication center in... (1. Aggressor force; 2. Friendly force).	ZEG
		Exercise (drill) message.	ZEU
GROUPS		The last word (or group)... 1) Received from you was...; 2) Transmitted to you was...).	ZAQ
	How do you count following text group(s)...?	Text group(s)...should be counted as...group(s).	ZBT
	How many groups does your message contain?	I have a message containing... groups to transmit to you (or to...)	ZDJ

		This message (or message... was incompletely received. Each word or group missed, which is indicated by position of ZEP in the message, will be forwarded as soon as obtained.	ZEP
HOLD		I am holding your message...	ZDM
		Hold my message...until correctness is confirmed.	ZDP
INCOMPLET E		Your message...has been received...(1. Incomplete; 2. Garbled.) Request retransmission.	ZES
		Station(s) to whom this message is routed obtain a complete copy of this interrupted transmission by addressing a service message to the originating station. (This procedure shall not be used between networks except as bilaterally agreed.)	ZXB
		This interrupted transmission is canceled. A complete retransmission from this station will follow without request.	ZPH
INCOMPLET E (Cont'd)		This transmission has been interrupted. A retransmission will follow without request. (Must be followed immediately by valid end of message sequence.)	ZXC
MERCAS		Place this message (or message...) on...(1. MERCAS; 2. MERCAS one operator period).	ZDI
		Place this message (or message...) on MERCAS indicated by following specific broadcast designator(s)...	ZOO
MESSAGE, FORMAL		I have a formal message for you (Precedence is...)	ZDA
MESSAGE, ICAO		This is a reprocessed ICAO message.	ZEB
MESSAGE, MISSENT		Message...(or this message has been (1. Missent to this station. Received at...Z. Message protected; 2. Missent to this station and unable to protect	ZEQ

		delivery due to... Request you re-transmit to the appropriate called station(s); 3. Misrouted to this station and has been re routed to...at...Z. Recommend corrective action; 4. Misrouted to this station and unable to protect delivery (for...) due to... Request your station protect delivery; 5. Routed to this station in format line 2, but without delivery responsibility in format lines 7 or 8. Advise; 6. Delayed due to misrouting, and is being retransmitted herewith.)	
MESSAGE, NUMBER	What is the number(or other indication) of the last message you received from me (or from...(call sign))?	The number (or other indication) of the last message I received from you (or from...(call sign)) is...	QUC
		Message(s)...number(s)...not transmitted on this schedule (or on schedule...) are no longer needed.	ZFJ
	Is (are) number(s) ... (to blank....) blank?	Number(s)...(to...) is (are)	ZIG
		Repeat headings of message number...to...transmitted by you (or...) to check serial numbers.	ZIH
MESSAGE, NUMBER (Cont'd)	What was...of your (or...'s) number...? 1) Date-time group; 2) Filing time)?	My (or...'s) number... had following ... 1) Date-time group; 2) Filing time).	ZII
		Message(s)...number(s)... will no longer be broadcast but are effective and of interest (to units indicated).	ZRR
MESSAGE SENT BY	Has...sent any message for me?	Here is the message sent by... at...hours.	QBM
METHOD		Send message for...on...kHz (or MHz) by...(1. Receipt method; 2. Broadcast method; 3. Intercept method).	ZOH
NON- DELIVERY		Message...undelivered... (1. Station closed until...Z; 2. Attempting alert station to re-open (for Flash or Immediate	ZDE

		precedence only); 3. Will continue efforts to effect disposal; 4. Advise disposition; 5. Will not continue further efforts. Request cancel and file; 6. Give more complete address).	
		I could not send message...to...	ZDO
OPERATING SIGNAL		Your operating signal (made at...) received as...(1. Not understood; 2. Not held).	ZAD
PASS		Pass plain language copy to...by secure means.	ZEA
		Pass this message to...(1. On arrival; 2. On return to base).	ZFB
		Pass message...(which is in your files) to addressee(s) for whom you are responsible using the indicated supplementary heading.	ZFE
		This message (or message...) is being (or has been) passed to you (or...) for...(1. Action; 2. Information; 3. Comment) (at the request of...).	ZFH
PRECEDENCE		Transmit (pass) this message(or message...) to...(for...) (1. Action; 2. Information).	ZOG
		Transmit only messages of and above precedence...	ZAN
		Transmit or handle this message at the lower precedence to the station or address designator(s) which follow(s).	ZOT
PRECEDENCE (Cont'd)		Reserved for future use by NACOSA/ISSC.	ZXE
		1. For peacetime operations: This message has been generated/mediated by a COMSIC TOP SECRET ATOMAL System High SCARS II System. The Maximum security classification authorized without off-line encryption released from SCARS II into the NICS TARE network is NATO SECRET. ATOMAL information at any security classification level released into	ZXF

		the NICS TARE network requires also offline encryption. 2. For TTW/Wartime operations after authorization from Operational Commander: This message has been generated/mediated by a COSMIC TOP SECRET ATOMAL SYSTEM HIGH SCARS II SYSTEM	
		This MSG has been generated/mediated by a NATO CONFIDENTIAL System High automated data processing system.	ZXG
		This MSG has been generated/mediated by a NATO SECRET System High automated data processing system.	ZXH
		This critical SCARS II MSG should be given precedence over other Flash messages. Note: Signals listed are reserved for use by NACOSA	ZXI
RADIOTELEPHONE	How may radiotelephone calls have you to book?	I have...radiotelephone calls to book.	QRJ
	Can you use telephony in... (language) with interpreter if necessary; if so, on what frequencies?	I can use telephone in... (language) on...kHz (or MHz).	QUE
RECEIPT	When and on what frequency was message...received?	Message...was received at... on... kHz (or MHz).	ZBQ
RECEIPT (Cont'd)		Message...was: (1. Received by (addressee(s) designation) at...Z. 2. Received by (addressee(s) designation communications center) at...Z. 3. Delivered to (addressee(s) designation) by broadcast at...A. 4. Forwarded to (addressee(s) designation) by commercial means at...Z. 5. Mailed to (addressee(s) designation) at...Z.	ZDF
		Station to station receipts are not required for this FLASH message. (Authorization for use must be prescribed by authorities	ZGC

		controlling networks/systems).-	
RECEIVE/ INTERCEPT	Have you received message...?	Message...(1. Not received; 2. Unidentified. Give better identifying data).	ZEC
		This message has been read (received or intercepted) from a ship at sea.	ZEF
		Following message has been read (received or intercepted).	ZFA
RELAY		Unable to relay message... in present form (1. Not in prescribed format; 2. Format line...incorrect; 3. No online facility available; 4. Call signs not encrypted; 5. Text not encrypted). We file. Transmit correctly prepared message to all addressees (or to...).	ZAH
		Message was relayed to...by... at... (on...kHz or MHz))	ZDQ
		Station(s) called relay this message to addressees for whom you are responsible.	ZOC
	Can you accept message for... (1. online; 2. offline).	Give me your message. I will dispose of it...(1. online; 2. offline).	ZOE
		Relay (pass) this message (or message...) to...now (or at...)	ZOF
		Relay this message via...	ZOK
		Relay this message only to the station(s) whose designation(s) precede this operating signal.	ZOY
		Relay this message (or message...) in its present form without decryption.	ZOZ
RELAY (Cont'd)		The text of this message is to be relayed in precisely the same format as that in which it is received. No characters or machine functions are to be added, inserted or deleted and the relative positions of the groups are to be retained.	ZPO
		This message has been forwarded ...(Number of times) by stations within this network.	ZPZ

		Note: The number shall be incremented by one each time the message is relayed within the network. The OPSIG will be removed prior to the message exiting the network.	
		Station called is responsible for relay or delivery to all stations in line two (2) or to stations indicated.	ZVA
		This message, relating to a warning, an alert, distress, or an emergency, is authorized to be relayed via the facilities of your network without prior arrangement.	ZVQ
		Retransmit this message (or message...) at once to all subordinate stations.	ZVR
		No forwarding action to the designation(s) immediately following is required.	ZWL
		I have.....messages (precedence) prepared in tape relay format for you (or for....). (Consideration should be given to receiving this message directly on to a printing perforator/typing reperforator).	ZPR
		Station called relay this message (or message...) to... in addition to predetermined responsibilities.	ZXK
RELAY (Cont'd)		Transmit this message to the addressee(s) indicated by the numeral(s) following... All addressees are to be counted consecutively as they appear (numbers to be separated by the Separative Sign).	ZXY
RELEASE		Originator authorized the transfer of this message into the secure networks of all authorities addressed, provided the networks are secure or approved for the classification of the message involved.	ZNM
REPETITION	Will you repeat what you (or...)	Following is what I (or...) sent	ZBD

	sent (at...)?	(at...).	
		Retransmit message...to... (for...) (1. Action; 2. Information).	ZBE
	Will you repeat message...(or portion...) (or will you rerun number)?	Following repetition (of...) is made in accordance with your request.	ZDK
		Message(s) serial number(s)... (to...) which was (were) transmitted during unserviceability of one or more transmitters, simultaneously keyed, will now be repeated.	ZFM
		Request you obtain retransmission of messages...from station...	ZXO
REPLY		Expedite reply(ies) to my... (1. Previous operating signal; 2. Request(s) for repetition and correction; 3. Service message...).	ZDB
		Replies to this message (or message...) are to be sent now (or at...).	ZEJ
	Is there any reply to message...?	There is no reply to message...	ZFI
REQUEST		This is my...request (or reply). (1. First; 2. Second; 3. Third; etc.).	ZAR
		Bring message...to the circuit.	ZDD
		Request message...be transmitted.	ZEE
ROUTING		1. Route traffic for...via... area broadcast. 2. Beginning at ...traffic for you (or...) will be routed via...area broadcast.	ZOR
	Request area routing for message for...?	Area routing for messages for... is...	ZOS
ROUTING (Cont'd)	How should traffic for...be routed?	Route traffic for...through... (on...kHz (or MHz)).	ZOU
		Station designation preceding this operating signal is the correct routing for this message rerouted by...	ZOV
SERIAL/ CHANNEL NUMBER		Two messages (...and...) received under channel number(or station serial number)... Both released.	ZFQ
		Cancel transmission...(made under channel or station serial number...).	ZFR



		Message...received without channel number (or station serial number) following message bearing channel number (or station serial number) ... Message released.	ZFT
		Channel numbers...and...preceded message... Lower number recorded and higher number blanked.	ZFU
		Message...containing channel number(s)...separated by portions of the message, released subject to correction. Take necessary action to provide corrected copy(to).	ZFV
		BLANK channel number(s)... Forward message...as channel number...	ZFW
		Channel number (or station serial number) is open.	ZFX
		This message (or message...) is being (or has been) passed out of proper sequence of station serial numbers.	ZIA
	Two messages... and...(or group counts and time or origin... and...), both received as serial number... What are correct serial numbers?	Change station serial number of message...to read number... or Assign to message... station serial number...	ZIB
	What is (are) station serial number(s) or channel number(s) of last message(s) you transmitted to me (or to...)?	Station serial number(s) or channel number(s) of last message(s) transmitted to you (or to...) is (are)...	ZIC
	What is (are) station serial number(s) or channel number(s) of last message(s) received from me (or from...)?	Station serial number(s) or channel number(s) of last message(s) received from you (or from...) is (are)...	ZID
SERIAL CHANNEL NUMBER (Cont'd)		Station serial number(s) or channel number(s)...(from...) has (have) not been received. Repeat message(s) or cancel serial number(s) or channel number(s).	ZIE
		I (or...) did not use serial number(s)...	ZIF
		I am now changing my channel	ZIJ

		number/letter. Last number sent in this series is that of this message.	
	What Channel Number(s) should I use?	Use Channel Number(s)....	ZIL
		This is a SUBOPAUTH edited version, either addressees and/or non-essential text have been removed from this message. Subsequent delivery of the originators unedited message is not intended unless requested.	ZPJ
		This is a SUBOPAUTH edited version, either addressees and/or non-essential text have been removed from this message. The originators unedited message will be delivered by other means.	ZPK
		Request unedited versions of edited messages, broadcast number(s)... be forwarded by means other than the submarine broadcast.	ZPL
SUBMARINE SIGNAL		Messages which follows is a submarine surfacing signal to be cleared on calling frequency.	ZPP
TAPE		Rerun all tapes run on...since... (1. Your present frequency; 2. ...kHz (or MHz); 3. Call sign...; 4. This channel or... channel).	ZAS
		Am preparing traffic (perforating tape) for transmission.	ZAT
TELEGRAM	By what private enterprise (or State administration) are charges for your accounts for station settled?	The accounts for charges of my station are settled by the private enterprise...(or State administration).	QRC
	Shall I send... telegrams at a time?	Send...telegrams at a time.	QSG
	What is the charge to be collected to...including your internal telegraph charge?	The charge to be collected to... including my internal telegraph charge is...francs.	QSJ
TELEGRAM (Cont'd)	Shall I repeat the last telegram which I sent you (or some previous telegram)?	Repeat the last telegram which number(s)...you sent me (or telegram(s))	QSM
	Shall I cancel telegram number ... as if it had not been sent?	Cancel telegram number...as if it had not been sent.	QTA

	How many telegrams have you to send?	I have...telegrams for you (or for...).	QTC
		Pass the following...(1. Private-message (telegram); 2. Service Telegram...) (Number of words charged for is...).	ZDU
		Private message (telegram) received for... Request instructions.	ZDV
		Private messages (telegrams) are not to be sent until further orders (or until...).	ZDY
TOLL	What is the charge to be collected to... including our internal telegraph charge?	The charge to be collected to... including my internal telegraph charge is...francs.	QSJ
	Will you relay to...free of charge?	I will relay to...free of charge.	QSP

**SECTION I****ENCODE****SECURITY AND CRYPTOGRAPHIC**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
AUTHENTI- CATION	What is authentication of... 1) Message...; 2) Last transmission; 3) ...)?	Authentication (of...) is... 1) Message...; 2) Last transmission; 3) ...).	ZNB
		All transmissions will be authenticated... 1) On all circuits; 2) On this circuit; 3) On...frequency).	ZNC
		You are using authenticator incorrectly... 1) Verify authenticator system key; 2) Check authentication of your last transmission).	ZND
		I am prepared to authenticate.	ZNE
		This message (or message...) received at this station... 1) Without authentication (when authentication is in force); 2) Incorrectly authenticated; 3) Correctly authenticated).	ZNQ
		Following message has been authenticated...(This signal is for use only over approved/ on-line circuits).	ZNS
		Following message has NOT been authenticated...(This signal is for use only over approved/ on-line circuits).	ZNT
AUTHENTIC- ATION		This channel (or...channel/circuit designated) is unserviceable for classified traffic.	ZVF
DECIPHER		Plain-text tape of this message should be prepared during process of decipherment.	ZNH
		Unable to decrypt message... (from indefinite call sign...) Note: Only to be used under	ZNO

		circumstances laid down in cryptographic instructions.	
ENCIPHER		You are encrypting...incorrectly (1. Operating signals; 2. Radio call signs; 3. Address groups).	ZNA
GATEWAY		Gateway commcen re-protect this message and re-encrypt using race/aroflex OFF-LINE system	ZNU
GATEWAY		Gateway commcen re-protect this message and re-encrypt using BEDERAL off-line system.	ZNV
GATEWAY		This message has been de-encrypted and re-encrypted at a gateway commcen.	ZNW
NON-APPROVED CIRCUIT		Do not forward this message unencrypted by radio or non-approved circuit.	ZNY
NON-APPROVED CIRCUIT		This message may be forwarded without change by radio or non-approved circuit.	ZNR
NON-HOLDERS		Addressees who are not holders of the cryptographic system employed in the text need not decrypt (decipher), but shall sight (read) translation at first opportunity and obtain copy if applicable.	ZNF
		Commands who are included in the collective address used in this heading, who are not holders of the cryptographic system employed in the text, are exempted.	ZNG
		Addressees who do not hold cryptographic facilities are exempted.	ZNK
OPERATION		Shift to...(1. On-line; 2. Plain) operation now.	ZNI
		Transfer operation of channel now to... (1. Normal; 2. Top Secret; 3. Conference; 4. Engineering) on-line cipher operation. NOTE: This signal is for use only when already in on-line cipher operation.	ZNP

PERSONNEL		<p>Message which follows is to be handled by...</p> <ol style="list-style-type: none"> <li>1) Officer Emergency Cryptographic team;</li> <li>2) Ratings Emergency Cryptographic team;</li> <li>3) Senior Comms Rating;</li> <li>4) Junior Comms Rating</li> <li>5) Coder (Educational).</li> </ol>	ZXS
QUERY		<p>Receiving Cryptographic Office concerned should refer queries relating to the text of this message (e.g., requests for verification) to...(address designators except plain language). Note: To be used in codress messages when necessary to indicate originating Crypto center and then normally limited to messages of Immediate precedence and above.</p>	ZNL
RELAY		<p>This message is not to be transmitted by radio telegraph or radiotelephone in any form over part of its route.</p>	ZXT
RELEASE		<p>Originator authorized the transfer of this message into the secure networks of all authorities addressed provided the networks are secured or approved for the security classification of the message involved.</p>	ZNM
SECURITY	<p>What are the security conditions of your termination(s) of this channel (or...channel/circuit designated)?</p>	<p>Security conditions at my termination of this channel(or..channel/circuit designated) are...</p> <ol style="list-style-type: none"> <li>1) Secured for Restricted</li> <li>2) Secured for Confidential;</li> <li>3) Secured for Secret;</li> <li>4) Secured for Top Secret).</li> </ol> <p>Note: The answer to this signal may only be passed on circuits cleared for classified traffic.</p>	ZVE
TRANSMISS-ION		<p>This message has been transmitted under serial number...at...by station whose designation follows...(1. By</p>	ZNJ

		on-line cipher; 2. By off-line encryption).	
WEATHER CONTROLLE D MESSAGE		This is a weather controlled message which is not to be transmitted in the clear over radio circuits.	ZIK

**SECTION J****ENCODE****VISUAL**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
CALL SIGN	What are the call signs of the ships in company with you?	Call signs of the ships in company with me are...(For visual use only).	ZJI
EQUIPMENT		... 1) Flaghoist; 2) Semaphore 3) 20 inch signaling projector; 4) 10 inch signaling projector; 5) ALDIS; 6) Intermediate; 7) Heather; 8) Daylight signaling lantern; 9) Masthead flashing light; 10) Infrared; 11) Signal search light; 12) Omni-directional flashing light; 13) Directional flashing light.	ZJM
EXERCISE		Intensive flag signaling will take place shortly (or in... minutes).	ZXR
LIGHTS		Read signaling light of...	ZJA
		Your light is unreadable... (1. Not trained correctly; 2. Not bright enough; 3. Too bright).	ZJH
		Directional lights of minimum brilliancy are to be used for all visual traffic between... and... except for messages of precedence priority and above requiring transmission to two or more ships.	ZJS
MESSAGES		Message...has been passed to those for whom I am responsible (or to...) (at...) but "L" has not been received.	ZJN
		Message which follows is to be encrypted and passed to all	ZJP



		addressees (by...). (Only to be used by visual not liable to interception.)	
PROCEDURES		Use double-flash procedure.	ZJJ
RELAY		Visual relaying station between senior officer (senior officer present afloat) (or...) and... is to be...	ZJF
RELAY (Cont'd)		Relay this message (or message...) by visual (to...).	ZOA
		I will relay your call sign to senior officer present afloat, whose call sign is...	ZOL
REPEAT		Repeat all flashing (or semaphore) messages made by the senior officer (senior officer present afloat).	ZJG
		Repeat back each group of the text of this message as it is transmitted.	ZJO
		Repeat signal (or message...) the senior officer (senior officer present afloat) (or ship indicated is now transmitting or is about to transmit.	ZJQ
SEMAPHORE		Only semaphore is to be used for visual signaling between...and...(or from...).	ZJR
SIGNAL		Repeat all flag signals made by the senior officer (senior officer present afloat).	ZJC
		Hoist the following signal.	ZJL
USE		Use... (1. Better light; 2. Better background).	ZJD
WATCH/ GUARD	May I close down visual watch now (or at...)?	Close down visual watch now (or at...).	ZJB
		Set visual watch now (or at...).	ZJE
	Are you (or is...) visual guard for...?	I am (or...is) visual guard for...	ZJK

**SECTION K****ENCODE****EXERCISE AND MISCELLANEOUS**

KEY	QUESTION	ANSWER, ADVICE OR ORDER	SIGNAL
AFFIRMATIVE		Affirmative (Yes).	ZUE
AIR RAID		Air Raid...(1. Warning; 2. In progress; 3. All clear).	ZUF
AIR SUPPORT		I have for you...(1. A request for direct air support; 2. A reply to a support request, precedence is...).	ZXP
AT...		At...	ZUB
ATTENTION		Your attention is invited to...	ZUI
COMPLY, UNABLE		Unable to comply.	ZUH
CORRECT		You are correct.	ZWG
		Correct version of the part of the last message (or message...) which was sent incorrectly is...(or will be found in...).	ZWN
CONFERENCE	...(Appointment Code) desires key conversation on this circuit with...(Appointment Code). Will you indicate when you are ready?	...(Appointment Code) is now ready to begin key conversation with... (Appointment Code).	ZUK
DUTIES		Stations are to answer... taking the following duties...A; ...B, ...C...etc.	ZWJ
EXERCISE		Indicate name of...(1. Operator on watch; 2. Senior rating on watch; 3. Operator who transmitted last message (or message...)). Note: This signal is authorized for use on connection with operator training only; it may not be used for any other purpose.	ZWB
		The following is to be taken as applying to personnel on watch only.	ZWC
		Carry out communication... (visual exercise number...)	ZWD

		at...senior officer (or...) is to conduct.	
		Voluntary exercise (number...) may be carried out now (or at...).	ZWE
		Answer last question (or question...).	ZWI
EXERCISE (Cont'd)		Following is answer to the last question (or question...).	ZWK
		Correct answer to last question (or question...) is...(or will be found in...).	ZWM
		Following message (or question, or exercise is for the exercise of... (1. Junior operators; 2. Senior operators; 3. Ratings on watch).	ZWO
		A junior operator is to carry out...(1. A standard flashing exercise; 2. A standard semaphore exercise; 3. A standard radiotelegraphy transmitting exercise; 4. A standard radiotelegraphy receiving exercise).	ZWP
FROM		From...to...	ZUC
INCORRECT		Incorrect.	ZWF
NEGATIVE		Negative (No).	ZUG
ORDERS		Until further orders (or until...).	ZUD
RECONNAISSANCE		I have for you...(1. A request for tactical reconnaissance; 2. A request for photographic reconnaissance; 3. A request for artillery reconnaissance). Precedence is....	ZXQ
STANDBY		Standby	ZUJ
TIMING	Request a timing signal now (or at...).	Timing signal will be transmitted now (or at...). The numerals indicating the time will be followed by a five second dash terminating exactly at the time indicated.	ZUA
TRY AGAIN		Try again.	ZWH
USE	Shall I use...?	Use...	ZTD
	Are you (or is...) able to use...?	I am (or...is) able to use...	ZTE
		Cease using...	ZTJ
		I am (or...is) unable to use...	ZTM

CHAPTER 4MISCELLANEOUS ABBREVIATIONS AND SYMBOLSSECTION A - DECODE


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ABBREVIATION	SIGNIFICATION OF SYMBOL
AC	Alto cumulus.
ACC	Area control.
ACFT	Aircraft
AD	Aerodrome.
ADZ	Advise.
AERO	Aero form of the International Code.
AGN	Again.
AIR	Relative to air.
ANT	Before.
APP	Approach control.
APR	After...(time or place)
AFRFOR	Area forecast.
ARR	Arrive (or arrival).
AS	Altostratus.
ASC	I am ascending (to...figures and units) height above...(datum)).
ATC	Air traffic control (in general).
ATP	At...(time or place).
AWY	Airway.
BABS	Beam approach beacon system.
BCST	Broadcast.
BOH	Break-off height.
BRF	Short (used to indicate the type of approach desired or required).
BTN	Between.
CB	Cumulonimbus.
CC	Cirrocumulus.
CEN	Degrees centigrade.
CI	Cirrus
CLA	Clear type of ice formation.
CLR	Cleared to...
CS	Cirrostratus.
CTA	Control area.
CTR	Control zone.
CU	Cumulus.
DB	I cannot give you a bearing. You are not in the calibrated sector of this station.
DC	The minimum of your signal is suitable for the bearing.
DCT	Direct (in relation to flight plan clearances and type of approach).

DES	I am descending to...figures and units) height above...(datum)).
DF	Your bearing at...hours was...degree in the doubtful sector of this station, with a possible error of...degrees.
DRT	Keep straight ahead.
DS	Adjust your transmitter, the minimum of your signal is too broad.
DT	I cannot furnish you with a bearing, the minimum of your signal is too broad.
DU	Position not guaranteed.
DY	This station is not able to determine the sense of the bearing. What is your approximate direction relative to this station?
DZ	Your bearing is reciprocal. (To be used only by the control station of a group of direction-finding stations when it is addressing stations of the same group).
E	East or Eastern longitude.
ER	Here... Aeronautical Note: In the international aeronautical telecommunication service ER may also be used to indicate Here with be used to indicate Herewith..
ERB	Landing off runway is permitted.
ETA	Estimated time of arrival.
ETD	Estimated time of departure.
ETI	The information is estimated.
FAH	Degrees Fahrenheit.
FBL	Light (used to qualify icing, turbulence, interference or static reports.
FIOR	Flight forecast.
FIR	Flight information region.
FL	The indication of vertical distance is given as flight level reference number.
FLT	Flight.
FNA	Final approach.
FOT	Units of English system.
FSL	Full stop landing.
FT	Feet (dimensional unit).
GCA	Ground controlled approach system.
GEO	Geographic or true.
GMT	Greenwich mean time.
GND	Relative to ground.
HBN	Hazard beacon.
HEL	Helicopter.
HF	High frequency (3,000 to 30,000 kHz.).
HR	Hours (period of time).
IAR	Intersection of air routes.
ID	Identification.
IFR	Instrument flight rules.
ILS	Instrument landing system.
IMI	Interrogation sign (question mark) (---..).

IMT	Immediately.
INA	Initial approach.
INF	Below...
INP	If not possible.
INS	Inches (dimensional unit).
IR	Ice on runway.
IRL	Intersection of range legs.
IVB	If forward visibility is less than... (figures and units).
IVR	If forward flight visibility remains... (figures and units).
KC, KCS, kHz	Kilocycles/kilohertz per second
KG	Kilograms.
KM	Kilometers.
KNH	Kilometers per hour.
KT	Knots.
LB	Pounds (weight).
LEFT	Left (direction of turn).
LF	Low frequency (30 to 300 kHz.).
LNG	Long (used to indicate the type of approach desired or required).
LRG	Long range.
LSA	Low intensity approach lighting system.
LSB	High intensity approach lighting system.
M	Meters.
MAG	Magnetic.
MB	Millibars.
MC, MCS or MHz	Megacycles/megahertz per second.
MER	The indication of vertical distance is given as TRUE height above mean sea level (e.g. after applying the correction for ambient temperature to the altitude reading of a pressure altimeter set to QNH).
MET	Meteorological..
MF	Medium frequency (300 to 3,000 kHz.).
MKR	Marker radio beacon.
ML	Statute mile(s).
MN	Minute (or minutes).
MOD	Moderate (used to qualify icing, turbulence, interference or static reports).
MPH	Statute miles per hour.
MRG	Medium range.
MS	Minus.
MSL	The indication of vertical distance is given as the reading, without correction for ambient temperature, of a pressure altimeter set to QNH.
MTU	Metric units.
MX	Mixed type of ice formation (white and clear).

N	North latitude. (To be used only with figures indicating latitude, e.g. 4730N.) Aeronautical Note: In the maritime mobile service, the abbreviation N signifies No and is used in that service to give a negative sense to Q signals.
NDB	Non-directional radio beacon.
NE	North-East.
NIL	I have nothing to send to you.
NM	Nautical mile(s).
NML	Normal.
NO	No.
NORTH	North (cardinal point of direction).
NR	Number.
NS	Nimbostratus.
NW	North-West.
OPA	White type of ice formation.
OPC	The control indicated is Operational Control.
ORD	Indication of an order.
PLA	Practice low approach.
PP	Descent through cloud (procedures).
PRES	The indication of vertical distance is (or is to be) replaced by the indication of the pressure, expressed in millibars, at the level and the position of the aircraft.
PREVU	The information refers to forecast and not to present conditions.
PSGR	Passenger(s).
PS	Plus.
PTN	Procedure turn.
QUAD	Quadrant.
RAD	The control referred to is Radio Control.
RCA	Reach cruising altitude.
RDO	Radio.
REP	Reporting point.
RITE	Right (direction of turn).
RNG	Radio range.
RNWY	Runway.
ROFOR	Route forecast.
RON	Receiving only.
RP	Rapid.
RTT	Radio-teletypewriter.
RUT	Standard regional route transmitting freqs.
S	South or Southern latitude.
SAP	As soon as possible.
SC	Stratocumulus.
SE	South-East.
SEV	Severe (used to qualify icing and turbulence reports).
SID	Standard instrument departure.

SKED	Schedule.
SLW	Slow.
SOL	The indication of vertical distance is given as the reading, without correction for ambient temperature, of a pressure altimeter set to QFE. (The abbreviation should only be used in the vicinity of the station which provided the QFE setting.)
SRG	Short range.
ST	Stratus.
STA	Straight in approach.
STD	The indication of vertical distance is given as the reading, without correction for ambient temperature, of a pressure altimeter having the sub-scale set to 1013.2 millibars (29.92 inches).
SUP	Above...
SW	South-West.
TAF	Abbreviated aerodrome forecast.
TAFOR	Aerodrome forecast.
TER	The indication of vertical distance is given as TRUE height above official aerodrome level (e.g. after applying the correction for ambient temperature to the vertical distance reading of a pressure altimeter set to QFE).
TFZ	Traffic zone.
TGL	Touch and go landing.
TIL	Until.
TIP	Until past... (place).
TO	To...(place).
TRB	It is not necessary to keep to the runways and taxi ways after landing.
TT	Teletypewriter.
TWR	Aerodrome control.
UAB	Until advised by...
UFN	Until further notice.
VAN	Runway control van.
VIA	By way of...
VIO	Heavy (used to qualify interference or static reports).
VFR	Visual flight rules.
VHR	Very high frequency (30,000 kHz. to 300 MHz).
VLR	Very long range.
VOR	VHF omni-directional radio range.
VSA	By visual reference to the ground.
W	West or Western longitude.
WX	Weather.
XS	Atmospheric.
YD	Yards.



YR

Your.

MISCELLANEOUS ABBREVIATIONS AND SYMBOLSSECTION B - ENCODE

ABBREVIATION OR SYMBOL	SIGNIFICATION	ABBREVIATION OR SYMBOL	SIGNIFICATION
<b>A</b>			
TAF	Abbreviated aerodrome forecast	DJ	Bearing doubtful because of interference.
SUP	Above...	DI	Bearing doubtful in consequence of the bad quality of your signal.
DS	Adjust your transmitter, the minimum of your signal is too board.	ANT	Before.
ADZ	Advise.	INF	Below...
AERO	Aero form of the International Code.	BTN	Between.
AD	Aerodrome.	BOH	Break-off height.
TWR	Aerodrome control.	BCST	Broadcast.
TAFOR	Aerodrome forecast.	VSA	By visual reference to the ground.
APR	After...(time or place).	VIA	By way of..
AGN	Again.	<b>C</b>	
AIR	Relative to air.	CC	Cirrocumulus.
ACFT	Aircraft.	CS	Cirrostratus
ATC	Air traffic control (in general).	CI	Cirrus.
AWY	Airway.	CLA	Clear type of ice formation.
AC	Alto cumulus.	CLR	Clear to...
AS	Altostratus.	CTA	Control area.
APP	Approach control.	CTR	Control zone.
ACC	Area control.	CB	Cumulonimbus.
ARFOR	Area forecast.	CU	Cumulus.
ARR	Arrive (or arrival).	<b>D</b>	
SAP	As soon as possible.	CEN	Degrees centigrade.
ATP	At...(time or place).	FAH	Degrees Fahrenheit.
XS	Atmospherics.	PP	Descent through cloud (procedure).
<b>B</b>		DCT	Direct (in relation to flight plan clearance and type of approach).
BABS	Beam approach beacon system.		
DO	Bearing doubtful. Ask for another bearing later (or at...hours).		

<b>E</b>		<b>I</b>	
E	East or Eastern longitude.	ASC	I am ascending (to...(figures and units)
ETA	Estimated time of arrival.	DES	I am descending (to...(figures and units) height above...(datum)).
ETD	Estimated time of departure.	DT	I cannot furnish you with a bearing, the minimum of your signal is too broad.
<b>F</b>		DB	I cannot give you a bearing. You are not in the calibrated sector of this station.
FT	Feet (dimension unit).	IR	Ice on the runway.
FNA	Final approach.	ID	Identification.
FLT	Flight.	IVR	If forward flight visibility remains..(figures and units).
FIFOR	Flight forecast.		
FIR	Flight information region.		
FSL	Full stop landing.		
<b>G</b>		IVB	If forward visibility is less than...(figures and units).
GEO	Geographic or true.		
GMT	Greenwich mean time.		
GCA	Ground controlled approach system.		
<b>H</b>		NIL	I have nothing to sent to you.
HBN	Hazard beacon.	ORD	Indication of an order.
VIO	Heavy (used to qualify interference or static reports).	INP	If not possible.
HEL	Helicopter.	IMT	Immediately.
ER	Here...Aeronautical Note: In the international aeronautical telecommunication service ER may also be used to indicate Herewith...	INS	Inches (dimensional unit).
HF	High frequency (3,000 to 30,000kHz.)	INA	Initial approach.
LSB	High intensity approach lighting system.	IFR	Instrument flight rules.
HR	Hours (period of time).	ILS	Instrument landing system.
		IMI	Interrogation sign (question mark)(..--..)
		IAR	Intersection of air routes.
		IRL	Intersection of range legs.
		TRB	It is not necessary to keep the runways and taxi ways after landing.
		<b>K</b>	
		DRT	Keep straight ahead.

KC, KCS, kHz	Kilocycles/kilohertz per second.		interference or static reports).
KG	Kilograms.		
KM	Kilometers.		<b>N</b>
KMH	Kilometers per hours.		
KT	Knots.	NM	Nautical mile(s).
		NS	Nimbostratus.
	<b>L</b>	NO	No.
		NDB	Non-directional radio beacon.
ERB	Landing off a runway is permitted.	NML	Normal.
LEFT	Left (direction of turn)	NORTH	North (cardinal point direction).
FBL	Light (used to qualify icing, turbulence, interference or static reports).	NE	North-East.
		N	North latitude. (to be used only with figures indicating latitude, e.g. 4730N.) Aeronautical NOTE: In the maritime mobile service, the abbreviation N signifies No and is used in that service to give a negative sense to Q signals.
LNG	Long (used to indicate the type of approach desired or required).		
LRG	Long range.		
LF	Low frequency (30 to 300 kHz.).		
LSA	Long intensity approach lighting system.		
	<b>M</b>	NW	North-West.
		NR	Number.
		NDB	Non-directional radio beacon.
MAG	Magnetic.		<b>P</b>
MNTN	Maintain.		
MKR	Marker radio beacon.		
MF	Medium frequency (300 to 3000 kHz).	PSGR	Passenger(s).
MRG	Medium range.	DG	Please advise me if you note an error in the bearing given.
MC, MCS	Megacycles/megahertz or MHz per second.		
MET	Meteorological.	PS	Plus.
M	Meters	DU	Position not guaranteed.
MTU	Metric Units.	DP	Possible error of bearing may amount to...degrees.
MB	Millibars.		
MS	Minus.	LB	Pounds (weight)
MN	Minute (or minutes).	PLA	Practice low approach.
MX	Mixed type of ice formation (white and clear).	PTN	Procedure turn.
			<b>Q</b>
MOD	Moderate (used to qualify icing, turbulence,	QUAD	Quadrant

	<b>R</b>		OPC	The control indicated is Operational Control.
RDO	Radio.		RAD	The control referred to is Radio Control.
RNG	Radio range		FL	The indication of vertical distance is given as flight level reference number.
RTT	Radio teletypewriter.		STD	The indication of vertical distance is given as the reading without correction for ambient temperature, of a pressure altimeter having the sub-scale set to 1013.2 millibars (29.92 inches).
RP	Rapid.		TER	The indication of vertical distance is given as TRUE height above official aerodrome level (e.g. after applying the correction for ambient temperature to the vertical distance reading of a pressure altimeter set to QFE).
RCA	Reach cruising altitude.		PRES	The indication of vertical distance is (or is to be) replaced by the indication of the pressure, expressed in millibars, at the level and the position of the aircraft.
RON	Receiving only.		MER	The indication of vertical distance is given as TRUE height above mean sea level (e.g. after applying the correction for ambient temperature to the altitude reading of a pressure altimeter set to QNH).
AIR	Relative to air.		ETI	The information is estimated.
GND	Relative to ground.			
REP	Reporting point.			
RITE	Right (direction of turn).			
ROFOR	Route forecast.			
RNWX	Runway.			
VAN	Runway control van.			
	<b>S</b>			
SKED	Schedule.			
SEV	Severe (used to qualify icing and turbulence reports).			
BRF	Short (used to indicate the type of approach desired or required).			
SRG	Short range.			
SLW	Slow.			
S	South or Southern latitude.			
SE	South-East.			
SW	South-West.			
SIA	Standard instrument approach.			
SID	Standard instrument departure.			
RUT	Standard regional route transmitting frequencies.			
ML	Statue mile(s).			
MPH	Statue miles per hour.			
STA	Straight in approach.			
SC	Stratocumulus.			
ST	Stratus.			
	<b>T</b>			
TT	Teletypewriter.			<b>T (Cont'd)</b>

PREV	The information refers to forecast and not to present conditions.		<b>W</b>
SOL	The indication of vertical distance is given as the reading, without correction for ambient temperature, of a pressure altimeter set to QFE. (The abbreviation should only be used in the vicinity of the station which provided the QFE setting.)	WX W OPA	Weather. West or Western longitude. White type of ice formation.
DC	The minimum of your signal is suitable for the bearing.		<b>Y</b>
DY	This station is not able to determine the sense of the bearing. What is your approximate direction relative to this station?	YD YR DF	Yards. Your. Your bearing at...hours was...degrees in the doubtful sector of this station, with a possible error of...degrees.
TO	TO...(place).		Your bearing is reciprocal. (To be used only by the Control Station of a group of direction-finding stations when it is addressing stations of the same group).
TGL	Touch and go landing.		
TFZ	Traffic zone.	DZ	
	<b>U</b>		
FOT	Units of English system.		
TIL	Until.		
UAB	Until advised by...		
UFN	Until further notice.		
TIP	Until past...(place).		
	<b>V</b>		
VHF	Very high frequency (30,000 kHz to 300 MHz).		
VOR	VHF omni-directional radio range.		
VLR	Very long range.		
VFR	Visual flight rules.		

CHAPTER 5SERIES ZYA - ZZZDECODE

(Reserved for intra-nation, intra--service.  
or intra-command use.)

SIGNAL	QUESTION	ANSWER, ADVICE OR ORDER
ZYA		
ZYB		
ZYC		
ZYD		
ZYE		
ZYF		
ZYG		
ZYH		
ZYI		
ZYJ		
ZYK		
ZYL		
ZYM		
ZYN		
ZYO		
ZYP		
ZYQ		

ZYR		
ZYS		
ZYT		
ZYU		
ZYV		
ZYW		
ZYX		
ZYY		
ZYZ		
ZZA		
ZZB		
ZZC		
ZZD		
ZZE		
ZZF		
ZZG		
ZZH		
ZZI		
ZZJ		
ZZK		
ZZL		
ZZM		
ZZN		



<i>ZZO</i>		
<i>ZZP</i>		
<i>ZZQ</i>		
<i>ZZR</i>		
<i>ZZS</i>		
<i>ZZT</i>		
<i>ZZU</i>		
<i>ZZV</i>		
<i>ZZW</i>		
<i>ZZX</i>		
<i>ZZY</i>		
<i>ZZZ</i>		

## CHAPTER 6

### DESIGNATION OF EMISSIONS

#### 601. EMISSION DESIGNATION FEATURES

Full designation of emissions will comprise a total of nine alphanumeric symbols, the first seven being mandatory. The symbols provide details of the following characteristics:

- a. Necessary Bandwidth. The first four symbols provide details of the necessary bandwidth which can range from 0.001Hz to 999GHZ.
- b. Classification. The next three symbols provide details of the basic characteristics of the emission.
- c. Additional Characteristics. The last two symbols, which are optional, describe any additional characteristics which may be useful in providing a more complete description of the emission. Where the fourth or fifth symbol is not used, this should be indicated by a dash where each symbol would otherwise appear.

#### 602. NECESSARY BANDWIDTH - THE FIRST FOUR SYMBOLS

The necessary bandwidth shall be expressed by three numerals and one letter. The letter occupies the position of the decimal point; it represents the unit of bandwidth and may be H for hertz, K for kilohertz, M for megahertz or G for gigahertz. In order to avoid a given bandwidth being expressed in more than one way, depending upon the choice of the unit, it is specified that the first character shall be neither zero nor K, M or G. It is further specified that the necessary bandwidth:

- between 0.001 and 999Hz shall be expressed in Hz (letter H);
- between 1.00 and 999kHz shall be expressed in kHz (letter K);
- between 1.00 and 999MHz shall be expressed in MHz (letter M);
- between 1.00 and 999GHz shall be expressed in GHz (letter G).

#### Examples

Necessary Bandwidth	Method of Designation
23.3Hz	25H3
850Hz	850H

5.45 kHz	5K45
25.45kHz	25K5
16 kHz	16K0
1.25MHz	1M25
2Mhz	2M00
5.65GHz	5G65

### 603. CLASSIFICATION - THE NEXT THREE SYMBOLS

The next three symbols describe the basic characteristics of the radio emission. It is not possible to give the minimum required information on the emission without the use of all three symbols.

#### a. First symbol - type of modulation of the main carrier

- |     |  |   |
|-----|--|---|
| (1) | Emission of an unmodulated carrier   | N |
| (2) | Emission in which the main carrier is amplitude-modulated (including cases where sub-carrier are angle-modulated).           |   |
| (a) | Double-sideband  | A |
| (b) | Single-sideband, full carrier  | H |
| (c) | Single-sideband, reduced or variable level carrier   | R |
| (d) | Single-sideband, suppressed carrier  | J |
| (e) | Independent sideband   | B |
| (f) | Vestigial sideband   | C |
| (3) | Emission in which the main carrier is angle-modulated  |   |
| (a) | Frequency modulation   | F |
| (b) | Phase modulation   | G |
| (4) | Emission in which the main carrier is amplitude and angle- modulated either simultaneously or in a pre-established sequence. | D |
| (5) | Emission of pulses (1)   |   |
| (a) | Sequence of unmodulated pulses   | P |
| (b) | A sequence of pulses   |   |

(i)	modulated in amplitude	K
(ii)	modulated in width/duration	L
(iii)	modulated in position/phase	M
(iv)	in which the carrier is angle-modulated during the period of the pulse	Q
(v)	which is a combination of the foregoing or is produced by other means	V
(6)	Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse	W
(7)	Cases not otherwise covered	X
b. Second symbol - nature of signal(s) modulating the main carrier		
(1)	No modulating signal	0
(2)	A single channel containing quantized or digital information without the use of a modulating sub-carrier (2)	1
(3)	A single channel containing quantized or digital information with the use of a modulating sub-carrier (2)	2
(4)	A single channel containing analogue information	3
(5)	Two or more channels containing quantized or digital information	7
(6)	Two or more channels containing analogue information	8
(7)	Composite system with one or more channels containing quantized or digital information, together with one or more channels containing analogue information.	9
(8)	Cases not otherwise covered.	X
c. Third symbol - Type of information to be transmitted (3)		
(1)	No information transmitted	N
(2)	Telegraphy - for aural reception	A
(3)	Telegraphy - for automatic reception	B

- |     |   |   |
|-----|---|---|
| (4) | Facsimile                                 | C |
| (5) | Data transmission, telemetry, telecommand | D |
| (6) | Telephony (including sound broadcasting)  | E |
| (7) | Television (video)                        | F |
| (8) | Combination of the above                  | W |
| (9) | Cases not otherwise covered               | X |

#### 604. ADDITIONAL CHARACTERISTICS - THE LAST TWO SYMBOLS

These symbols describe any additional characteristics useful in providing a more complete description of the emission. The use of these symbols is optional; however, they would not normally be used except where their use could assist in resolving cases of harmful interference to military radio system.

- a. The fourth symbol defines details of signal(s);
- b. The fifth symbol defines nature of multiplexing.

#### 605. FOURTH SYMBOL - DETAILS OF SIGNAL(S)

- |    |  |   |
|----|--|---|
| a. | Two-condition code with elements of differing numbers and/or durations                           | A |
| b. | Two-condition code with elements of the same number and duration without error-correction        | B |
| c. | Two-condition code with elements of the same number and duration with error-correction           | C |
| d. | Four-condition code in which each condition represents a signal element (of one or more bits)    | D |
| e. | Multi-condition code in which each condition represents a signal element (of one or more bits)   | E |
| f. | Multi-condition code in which each condition or combination of conditions represents a character | F |
| g. | Sound of broadcasting quality (monophonic)   | G |
| h. | Sound of broadcasting quality (stereophonic or quadrophonic)                                     | H |

- |    |  |   |
|----|--|---|
| i. | Sound of commercial quality (excluding categories given in sub-paragraphs (j) and (k) below                      | J |
| j. | Sound of commercial quality with the use of frequency inversion or band-splitting                                | K |
| k. | Sound of commercial quality with separate frequency-modulated signals to control the level of demodulated signal | L |
| l. | Monochrome   | M |
| m. | Colour   | N |
| n. | Combination of the above   | W |
| o. | Cases not otherwise covered  | X |

606. FIFTH SYMBOL - NATURE OF MULTIPLEXING

- |    |   |   |
|----|---|---|
| a. | None  | N |
| b. | Code-division multiplex (4)   | C |
| c. | Frequency-division multiplex  | F |
| d. | Time-division multiplex   | T |
| e. | Combination of frequency-division multiplex and time-division multiplex | W |
| f. | Other types of multiplexing   | X |

NOTES:

(1) Emissions, where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation) should be designated under paragraph 603.a.(1) and 603.a.(3).

(2) This excludes time-division multiplex.

(3) In this context the word "information" does not include information of a constant unvarying nature such as provided by standard frequency emissions, continuous wave and pulse radar, etc.

(4) This includes bandwidth expansion techniques.

607. THE CLASSIFICATION OF TYPICAL EMISSIONS IS TABULATED AS FOLLOWS:

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Amplitude Modulation	With no modulation		N0N
	Telegraphy without the use of modulating audio frequency (by on-off		A1A (for aural reception)
	Telegraphy by the on-off keying of an amplitude modulating audio frequency or audio frequencies, or by the on-off keying of the modulated emission (special case: an unkeyed emission amplitude modulated)		A2A (for aural reception)
	Telephony	Double Sideband Single Sideband,	A3E
Amplitude Modulation (Cont'd)		Full carrier Single Sideband	H3E
		Reduced carrier Single Sideband	R3E
		Suppressed carrier	J3E
		Two independent sidebands	B8E
	Facsimile (with modulation of main carrier either directly or by a frequency modulated sub-carrier		A3C
		Single sideband, reduced carrier	R3C
	Television	Vestigial sideband	C3F
	Multi-channel voice frequency telegraphy	Single sideband, reduced carrier	R7B
	Cases not covered by the above, e.g. a combination of telephony and telegraphy	Two independent sidebands	B9W
Frequency (or Phase) Modulation	Telegraphy by frequency shift keying without the use of a modulating audio frequency: one of two		<u>1<sup>st</sup> Symbol</u> F = frequency modulation G = Phase

	frequencies being emitted at any instant.		F1A = (for aural) G1A = reception
	Telegraphy by the on-off keying of a frequency modulating audio frequency or by the on-off keying of a frequency modulated emission (special case: an unkeyed emission, frequency modulated).		F2A = (for aural) G2A = reception
	Telephony		F3E G3E
	Facsimile by direct frequency modulation of the carrier		F3C G3C
	Television		F3F G3F
	Four-frequency duplex telegraphy		F7B G7B
	Cases not covered by the above, in which the main carrier is frequency modulated		FXX (1)
Pulse Modulation	A pulsed carrier without any modulation intended to carry information (e.g. radar)		P0N
	Telegraphy by the on-off keying of a pulsed carrier without the use of a modulating audio frequency		K1A (for aural reception)
	Telegraphy by the on-off keying of a modulating audio frequency or audio frequencies, or by the on-off keying of a modulated pulsed carrier (special case; an unkeyed modulated pulsed carrier).	Audio frequency or audio frequencies modulating the amplitude of the pulses	K2A (for aural reception)
		Audio frequency or audio frequencies modulating the width (or duration) of the pulses	L2A (for aural reception)
		Audio frequency or audio frequencies	M2A (for aural reception)



		modulating the phase (or position of the pulses)	
	Telephony	Amplitude modulated pulses Width (or duration) modulated pulses. Phase (or duration) modulated pulses Code modulated pulses (after sampling and quantization)	K3E  L3E  M3E  V3E (for example)
	Cases not covered by the above in which the main carrier is pulse modulated		FXX (1)

Notes: 1. The symbols XX are available for systems where for security or other reasons it would be preferable not to disclose details of the emission.

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